SCHOOL AND COLLEGE PLACEMENT

Journal of the Association of School and College Placement

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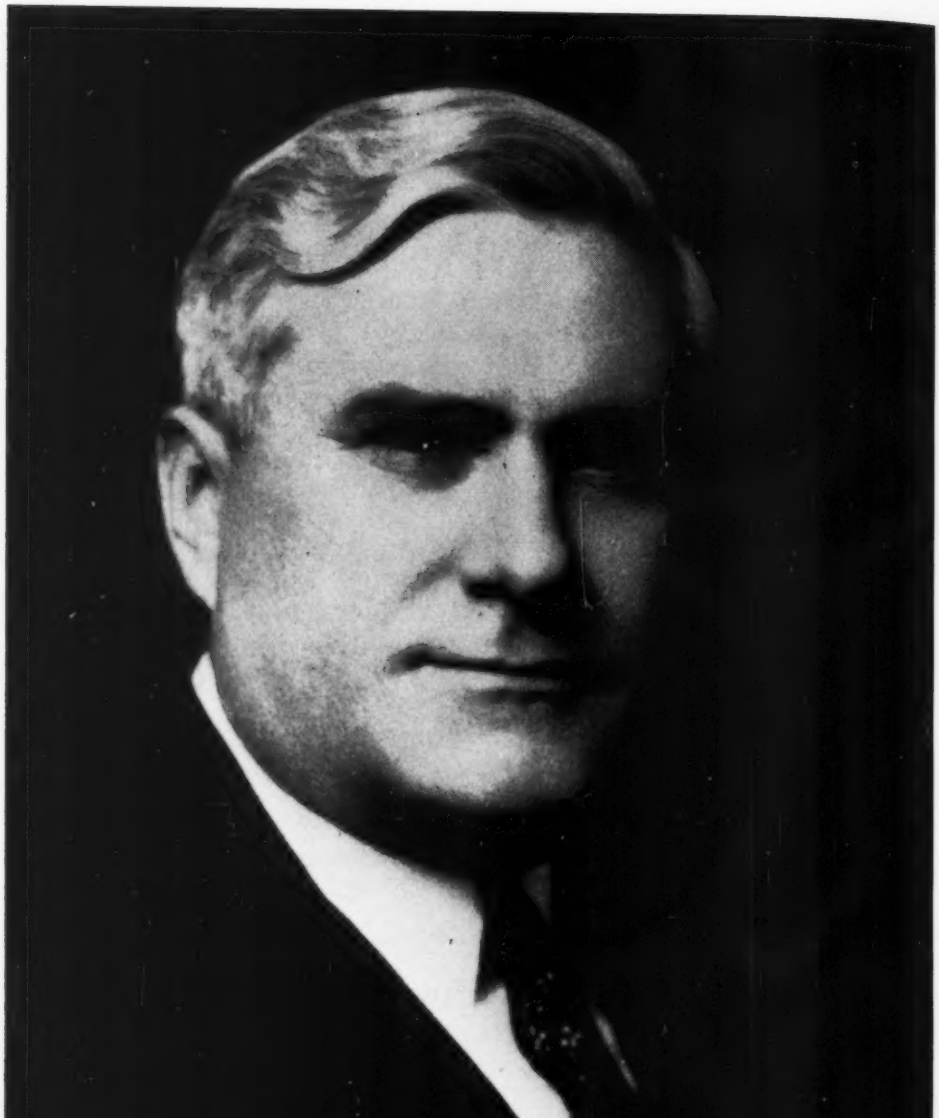

A. J. STODDARD

Superintendent of Schools

PHILADELPHIA, PA.

THE EFFECTIVE USE OF NATIONAL MAN POWER*

A. J. STODDARD

Chairman, Educational Policies Commission

IN 1935 the Educational Policies Commission was established by the National Education Association and the American Association of School Administrators, and was charged with the task of "stimulating thoughtful, long-term planning within the educational profession." But with the outbreak of war in September 1939 and during the period of national emergency which preceded our active military participation in the war, many problems of educational policy developed which the Commission felt deserved thoughtful attention. From time to time, therefore, we prepared and published a series of recommendations which seemed appropriate.

In January 1942 the Commission met to review the draft of *A War Policy for American Schools*, which was published in February. This statement was designed to help schools cooperate intelligently and effectively in the war effort. The first part of the statement is a list of educational *priorities* for schools—practical suggestions on how schools can share in the war effort and at the same time enrich the educational opportunities offered to their students.

Educational Priorities for Schools

The Commission recommends that without abandoning essential services of the schools, certain war duties be given absolute and immediate *priority* in time, attention, personnel and funds over any and all other activities.

First, *schools should train workers for war industries and services.* An adequate supply of skilled workers and technicians is essential to final victory.

Second, *schools should participate directly in the war activities of the community.* For example, students in high school commercial courses might volunteer services like typing and filing to local defense organizations. Given adequate supervision for these activities, the students will feel that they are accomplishing something worthwhile, and at the same time will receive real educational benefit from their experiences.

Third, *schools should help to conserve essential war materials.* For instance, they can teach practical methods of economizing in the home in the use of important materials such as food, rubber or gasoline.

Fourth, *schools can help to finance the war through the sale of defense savings stamps and bonds.* This activity will also furnish occasions for teaching students valuable lessons in systematic saving.

Fifth, *schools can increase the effectiveness of our man power* by providing instruction for adults who lack the basic education necessary for service in war industries or the armed forces. Selective Service boards are rejecting men who do not have at least a fourth-grade education. The schools can make more men and women available for war services by helping them to meet minimum educational requirements.

Sixth, *schools should promote health and physical efficiency.* They should make certain that the program for health and physical training gives priority to activities which develop the health, skill and strength of *all* students, rather than emphasizing sports which may win glory for the school but in which only a few students can take an active part.

Seventh, *schools should protect their students and property against attack.* Officials should cooperate promptly and fully with agencies for civilian defense in taking whatever precautions may be necessary.

Eighth, *the ideals of democracy must be protected against war hazards.* At this time

* This article has been adapted from the Educational Policies Commission's statement, *A War Policy for American Schools*, February, 1942. Educational Policies Commission, 1201 Sixteenth Street N.W., Washington, D. C.

let schools stand as living symbols of the democratic faith! To do this they must show tolerance and respect for minorities; they must provide equal opportunity for all; they must guard against any unfair discrimination of race or creed.

Ninth, *schools should teach the issues, aims and progress of the war and the peace.* Americans young and old should understand the proportions of the conflict in which we are engaged and the issues at stake. All should learn to appreciate the problems of maintaining international justice and be ready to support our government in assuming a responsible part in the reconstruction of the world after the war.

Tenth, *schools can aid in sustaining the morale of both children and adults.* High pressure methods of "selling" morale will not be effective with the citizens of American democracy. The only method of sustaining morale that is worthy of a free people is the method of education.

Eleventh, *schools should maintain intelligent loyalty to American democracy.* This nation needs the kind of loyalty that will set aside personal interests for the common cause. Such loyalty can be developed in the schools by promoting the clearest possible understanding of the ideals and nature of American democracy and by providing practice in actually living the ways of democracy.

Complete and Efficient Use of Man Power

In Part Two of the statement, the Commission outlines general policies which concern some of the more difficult problems arising from the war situation. One of these problems which must be solved if we are to carry on the war successfully is the complete and efficient use of all our resources of man power. Complete use of man power means that every person is directing all his efforts into essential war activities—whether in the fighting forces, in war industries, in government service, or in the defense and care of civilians—and that he is making full use of his special abilities and training.

In the Selective Service system we have set up a fair and rational means for determining how each man can best serve the country in wartime. One factor that is considered in determining whether a man should be assigned to military or civilian service is the type of special skills he possesses. If, on the basis of his special skills, he is deemed "essential" in civil life, he may be deferred from military service for six months' periods. This is also true for students in training for "essential" work whether of a military or a civilian nature.

The Selective Service system as it now works, however, presents certain difficulties. First, it is impossible to be certain what is "essential" work. There is no justification for exempting a young man from military service unless a real shortage exists or is likely to exist in the field of work for which he is being trained.

In the second place, young people who are just reaching the age when they are no longer required by law to attend school, or are old enough to enter the military service by enlistment are faced with a number of very difficult and important problems. The decisions they make, long before they reach the age when they will be governed by Selective Service, may seriously affect the operation of our system to organize the man power of the nation.

For example, young people are free to enter any occupation they may choose and in which they may secure employment. Or they may, if they have the necessary financial resources, continue their education. Young men seventeen years of age or older who can meet certain physical and other standards may enlist in certain branches of the armed forces. Therefore, a young man *must deliberately choose* to enter a course of training for "essential" work.

National Education Association Headquarters, Washington, D. C., Which Houses the Educational Policies Commission

Necessity for Wise Counseling of Youth

Under war conditions, when the choices made by youth are so vital to the safety of the nation, the Educational Policies Commission is convinced that educational agencies should make a special effort to advise and counsel young people—whether they are still in school or already out of school. The object of such advice and counsel would be to help all youth to reach decisions that will lead to the most efficient use of their abilities as individual units in the nation's total man power.

First, young people should be discouraged from leaving school indiscriminately in order to accept employment before completing their educational course. There is no indication at present of any necessity to reduce the standard total amount or length of public school education. It is far better, in the absence of any serious shortage of unskilled labor, to

adjust school calendars and class schedules to the war emergency. This can be accomplished by intensifying and accelerating the secondary-school course through a longer school day, week, or year, and by relating the school program more directly to the national war effort. Students who plan to enter war industries and who have the ability to become skilled workers should be cautioned against withdrawal from school to accept "one-skill" jobs. The present bottleneck in labor is at the level of *skilled* workers.

Second, young men should understand *all* the possibilities of national service that are open to them in time of war. They should be guided to make their decisions as to the work which they can do best on the basis of complete and accurate information, and after a careful and thoughtful examination of many types of service in the light of their own known abilities. As long as volunteering is a necessary method of recruiting men below the age of twenty for certain branches of the armed forces, schools and colleges have a grave responsibility to see that reliable information about these types of military service is coolly and impartially provided to all interested students.

Third, in counseling youth with reference to continuing their education, efforts should be made to conserve superior intellectual and other abilities for national service in scientific research and leadership. Those who possess such abilities *must* be given thorough advanced education and placed in positions where they can best serve the nation. If a qualified youth lacks the financial resources to continue his training, then they should be provided from public funds. As we face the likelihood of a long and destructive war, the safety of our nation may well depend upon a steady and adequate supply of persons with superior technical and scientific training and abilities in war industries, the military, naval and civil services, and elsewhere. Scarcity in this field might easily be disastrous. It should be remembered that it was the work of a group of university physicists that gave the R.A.F. the technical air superiority which made an invasion of Britain by the Germans impossible in 1940.

The Commission believes that the wise counseling of youth is one of the most important services schools can render to the nation in this war. They have suggested that all schools and colleges establish an educational and occupational advisory service for youth below the age covered by Selective Service. Such an advisory service should be universal, nationwide, professionally administered, free, and closely correlated with the employment services. The personnel rendering the service should be equipped with the information which will enable them to speak with authority concerning the needs of the war situation and the desires of the federal government.

Program for Development of Special Talents

In addition, the Commission believes that there should be established certain controls which will ensure the development of special talents for special services. They suggest as a starting-point, a procedure along these general lines:

1. Set up a reserved category of essential men to constitute approximately 10 per cent of each age group from seventeen to nineteen years, inclusive. Men should be enrolled in this category on certification of some competent public authority, possibly the high school principal in the district of their residence or school attendance. The qualifications would be (a) sound physique (those physically not liable to service need not be reserved, for they present no problem); and either (b) intellectual promise along scientific lines; or (c) general ability and leadership; or (d) special characteristics likely

to make the man a good pilot or flying officer.

2. Place men in the reserved category under the control of special boards in each state. These boards would have attached to them Army and Navy officers. They should have power to allocate men in the reserved category to such activities as (a) to the Army and Navy as enlisted men; (b) to schools or colleges for additional part-time or full-time training; (c) to officer training corps; (d) for commissions.

3. Provide federal funds to finance whatever further education is decided on for men in the reserved category, in either public or private institutions, the government paying full costs. It is essential that this group be picked absolutely irrespective of the financial status of their parents.

The Commission has suggested these measures as a framework for developing a policy to ensure an adequate supply of trained and able personnel for "essential" work of all types. Such a policy would be entirely consistent with our democratic tradition. Young people will remain free to make their own decisions but will be aided by complete and reliable information, while those selected for advanced training and for positions of responsibility will be chosen on the basis of their ability alone.

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Bertrand J. Perry, *President*

"TRAINING WITHIN INDUSTRY"

C. R. Dooley

Director, Training Within Industry Branch, Labor Division, War Production Board

C. R. Dooley

THE Training within Industry program was started in September, 1940, when there was already evidence of the imminent shortage of skilled people for the rapidly expanding defense production. From the beginning it was recognized that the burden of induction and training of new people in new jobs would rest largely upon industry itself. At the first meeting of the Committee on Industrial Training, Council of National Defense, the Training within Industry program, as formulated by Sidney Hillman and Owen D. Young, was launched on the basis that "The first reservoirs of skill will be men trained in industry itself, for they have the qualifications of experience. As compartments are potentially threatened in any area, the training facilities in industry in that area should be brought into play so that they will be ready to supply the deficiencies."

The underlying purpose of this program, which is staffed by training and personnel experts borrowed from industry itself, is *to assist defense industries to meet their manpower needs by training, within industry, each worker to make the fullest use of his best skill up to the maximum of his individual ability, thereby enabling production to keep pace with defense demands.*

Major Objectives

The Training within Industry program deals particularly with industry's own personnel responsibilities, and the four major points are:

1. Upgrading to jobs requiring higher skills, of all classes of personnel as their experience and abilities warrant, through planned job progression, job rotation and intensive supplementary instruction both on and off the job. Each plant should consider the talent and experience of its own personnel before employing new men. In an upgrading program the time limit cannot be definite; it is controlled by available opportunities, depending upon production programs and specific vacancies as they occur. This differs from an apprenticeship program where the opportunity is controlled by advance agreement. Therefore, while craftsman experience may be gained by an apprentice in from three to four years, it may take the production specialist two or three times as long, or longer, to acquire corresponding skill and versatility through an upgrading program. In times of rapid expansion, when there is a shortage of skilled workers, there is no choice but that of using inexperienced workers from other kinds of work or young people without any work experience but with good orientation background gained in public vocational schools during pre-employment training. Through intensive instruction they must then be brought to their highest skill on a limited operation in the shortest possible time. Advancement into more skilled work should always be made from among employees of longer experience on jobs which are good foundations for the higher skills. Attempts should not be made to replace skilled workers by narrowly skilled specialists.

2. Development of Production Specialists through intensive instruction on the job according to basic operations.

3. Development of all-around Skilled Mechanics through trades apprenticeship, in accordance with Federal standards, separate from production worker training, for the purpose of developing a predetermined, limited

OEM Defense Photo by Palmer

In the Tool and Die Building at the River Rouge Plant, Vast Facilities Are Being Used to Train Personnel for the U. S. Navy. Here a Naval Cadet Is Setting up a Job on a Lathe, under the Skilled Supervision of a Master Mechanic. Ford River Rouge Plant, May, 1941.

number of all-around journeymen mechanics. Apprenticeship training covers a definitely planned program of experience, scheduled and assigned step by step to enable the apprentice over a predetermined time to acquire skill in increasingly difficult kinds of work in a trade. For every skilled job there is related technical matter, much of which can best be taught off the job, and to be effective, this related instruction must be very closely tied in with the current job experience. Practice, related theory and technical knowledge must go hand in hand, and workers, employers and technical educators should collaborate in determining what shall be included in this instruction and how it can best be related to the work experience.

4. Development of Supervisors through careful selection, assignment of supervisory duties of increasing responsibility and provision for related organized help through discussions and conferences under both plant and outside auspices; also the development of technical and other management assistants.

Effective methods and procedures of well managed companies were drawn on through conferences with other experienced training and personnel executives and plant visits in order that T.W.I. could serve as a practical "clearing house" to make findings available to war contractors throughout the country.

A series of bulletins was prepared to record the philosophy and procedures bearing upon training as a part of production management, and these have been used widely in industry, governmental departments and educational institutions. In addition to describing the facilities of the Training within Industry

Branch, these bulletins cover the setting-up of complete training programs, training of production operators, improving the caliber of supervision, and off-the-job training and upgrading. Their use proved very helpful, and in the last few months the early basic bulletins have been supplemented by examples of specific application in particular industrial plants and industrial processes. For instance, special reports have been issued dealing with the training of operators for the high and specific skill of lens grinding; with the manning of new mass production plants in localities where no experienced labor was available; and with experience in creating and maintaining upgrading plans.

Organization

In the organization of the Training within Industry program, it was decided to maintain a relatively small headquarters staff, since it is necessary that the activity be decentralized and carried on throughout the country in the particular industrial areas in which the problems exist. The men at headquarters have consistently worked with District Representatives and training consultants in bringing about effective approaches to contractors and making available an exchange of the best experience which could be uncovered throughout the country. In this same way, the District Representative in each district has made available to the defense contractors and subcontractors in his area the service of Training within Industry. Because of the mutual interest of labor and management in so comprehensive and important a program, it was decided that the assistance of advisory groups would be needed, and a committee, consisting of six men from labor and six from management, has participated in the guidance of the work.

The Work in the Field

The T.W.I. program renders the following assistance to industry: help in the analysis of training needs; aid in setting up a program within the plant to meet its needs; transmitting of experience of other employers who have met their training problems; aid in the most effective use of tax-supported Government agency services, such as State and Federal Employment services, vocational and trade schools, engineering colleges, N.Y.A., W.P.A., C.C.C., U. S. Office of Education and the Apprenticeship Committee of the Department of Labor. Only through interpreting job requirements and the needs of industry to those agencies and gaining their closest coordination, can maximum pre-employment education and experience be furnished, as well as related supplementary instructions for employed workers.

The whole objective in the field has been to assist contractors and subcontractors in diagnosing their training needs and formulating suitable training set-ups. At first, in the belief that there was a surplus of unemployed skilled men available, employers were reluctant to take action in planning to meet their anticipated needs for employees in various occupations. In the early months T.W.I. received relatively few specific requests for help from employers, and finally plans were worked out whereby T.W.I. took the initiative, so that principal contractors were approached, their existing plans appraised and, where possible, complete surveys inside their plants carried on. In such in-plant surveys, specific recommendations were made and followed up by training consultants.

When the United States Department of Education launched the vocational schools' defense training program to help unemployed workers to prepare themselves to enter defense industries, they had difficulty in securing from industry information specific enough to enable them to develop the training courses to fit the particular needs of any given plant. Because of the newness of these special public schools and employment offices and the lack of knowledge of their availability to industry, many employers did not take full advantage of the pre-employment training and referral

OEM Defense Photo by Palmer

INSPECTORS INSTRUCTED

STUDENT INSPECTORS LEARN THE INS AND OUTS OF THEIR TRADE AT WATERTOWN ARSENAL, MASS. THE MECHANISM UNDER DISCUSSION IS THAT OF A 37 MM. GUN ANTI-AIRCRAFT CARRIAGE, M3, ONE OF THE MANY BEING TURNED OUT FOR NATIONAL DEFENSE.

and placement services of State Employment Offices, but the T.W.I. panel consultants drew the attention of defense contractors to their availability. Cooperation with Government agencies at the local level brought about a better understanding on the part of industry of the place of N.Y.A. work experience, W.P.A. work experience and school training, pre-employment and supplemental training, vocational defense courses and engineering defense training plans. An effort was made to assist the Federal Apprenticeship Unit in bringing to the attention of defense manufacturers the availability of the field service, and distinct progress was also made in inaugurating new apprenticeship programs, especially in manufacturing industries.

Nearly 2,500 companies have been directly reached through the efforts of T.W.I. headquarters and field staffs; these companies now employ well over three million employees, and, as the defense program grows, they are faced with still further rapid expansion of their organizations. This expansion will increase the demand for T.W.I. services not only because of the need for more employees, but also because of the growing scarcity of skilled employees and still further because of the increasingly acute problem of supervisory needs for new plants and additional shifts.

Efforts to Increase Available Skills

Speed received the early emphasis in the problem of increasing skills in readiness for the needs of defense industries, for plans had to be streamlined to meet the emergency. The promotion of trade apprenticeship and the

bringing about of an understanding on the part of the apprenticeship field people that they could render service in connection with intensive job instruction, as well as the longer time upgrading for skill, received quick attention.

Training within Industry assisted in the accurate interpretation of defense industry's personnel needs so that vocational and college courses might, to a greater extent be focused on appropriate training for specific manpower requirements which are practical and immediately applicable to defense production.

The Director and Associate Director, in the hearings before Congress, helped to bring about an understanding of industry's needs for Government assistance in connection with pre-employment training, related instruction for employed people and N.Y.A. work experience projects, as well as the need for attention to apprenticeship and to industry's own internal training problems.

Because of the close cooperation between management and labor representatives from the very beginning of the T.W.I. Branch activity, better understanding and mutual confidence have come about, and these relationships have resulted in the development of constructive and useful ways of helping the defense program.

Furthermore, many representatives of vocational education say that the last year's experience, which has brought them more closely in contact with industrial methods, needs, and modern equipment will have a very constructive and beneficial reaction on future vocational education. The fact that many skilled persons from industry have been brought into this work as instructors will undoubtedly effect the content of school courses, both for the beginning worker and for those who are already employed but who are endeavoring, through the acquisition of additional knowledge and skill, to qualify themselves for advancement.

The Future Outlook

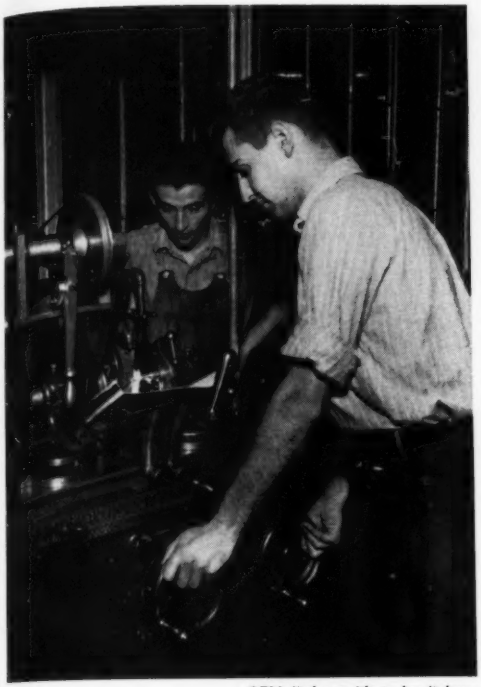
The continued rapid expansion of defense production to meet the increasing needs of the armed services will demand more shifts. Therefore, more supervisors will be needed during the next few months. Accordingly, more attention must be given to industrial leadership through improvement of existing supervisory lines within industry as well as training new lead men and foremen. The importance of better supervision is being emphasized, inasmuch as it is necessary that defense industries utilize all the talent and ability of not only their entire supervisory and technical staffs, but of all individual workers as well.

Training and the accompanying human relations problems have a large share in the attaining of maximum production. A definite effort is being made, through personal contact, to outline for the individual contractors the tested experience of other employers in training personnel.

Greater attention must be given to instruction, since a large share of the defense program has to do with preparing individuals and organizations to take up new duties incidental to making products which they have never made before and handling materials with which they are unfamiliar. Furthermore, new knowledge has to be sought and applied regarding the transferability of skill from one occupation to another, from one plant to another, from one industry to another. This is being forcefully brought home to workers and managements alike through the impact of material priorities upon employment.

Job Instructor Training

A streamlined, *intensive* Job Instructor Training Program was launched on an experimental basis in the New Jersey District last fall to help new supervisors, lead men and experienced workers to become more competent in breaking in new employees and in training present employees for new jobs. This



OEM Defense Photo by Palmer

AN APPRENTICE LEARNING HOW TO GRIND TOOLS AT THE SPRINGFIELD ARMORY

program, which was developed by experienced industrial training and personnel men, proved to be so helpful there that it was rapidly extended on a nation-wide basis. Existing supervisory training courses were taken and streamlined in "packaged" form. Finally, after several cycles of instructing and revising, a compact, practical procedure was distilled out of the previous material, and the net result is a specific, "jig and fixtured" coaching procedure for small groups of lead men and women on the theme "How to Instruct a Man on the Job."

This plan places in the supervisors' hands a simple, keen-edged "precision training tool." Four steps in breaking in the worker on a new job are explained, demonstrated, practiced and reviewed. They include (1) preparing the worker to receive instructions by putting him at his ease; finding out what he already knows about the job, enlisting his interest by relating his work to the final product and having him see the job from the angle from which he will work; (2) presenting the operation by describing how it is done, illustrating the performance and making the "key points" clear; (3) testing his performance by having him do the job and tell why he is doing it that particular way, having him explain the key points, correcting his errors tactfully and having him repeat the operation until he is sure of it; (4) putting him on his own, albeit checking him frequently, and gradually tapering off this extra coaching until the individual can work under normal supervision.

Industrial employers who are expanding forces or transferring employees to new work can avail themselves of the Job Instructor Training Program. Although this program is very young, to date 72 top-notch training men throughout the country have passed through institutes which have equipped them to train Trainers. They have trained 1,833 War Production Trainers who have, in turn, trained close to 40,000 lead men, gang bosses, foremen, sub-foremen and supervisors in over 1,400 War Production Plants. The goal is to train some 200,000 lead men, foremen, etc., by July first of this year, after which the goal will probably be doubled or trebled in view of the fact that at this time there are approximately only 5,400,000 people employed in War Production industries as compared with an estimate just released of around 15,000,000 people to be in War Production industry by the last quarter of this year.

The acceptance of the fundamentals of the T.W.I. program—the philosophy of upgrading and promotion within industry, the importance of using sound and intensive instruction methods, the specific planning for organized apprenticeship and the acceptance on the part of upper management of the importance of good supervision and the backing of sound personnel programs and procedures—provides a foundation upon which increasingly sound management and worker relationships must rest.

WAR-TIME DEMANDS FOR HIGHER EDUCATION

FRANK R. ELLIOTT
Director of Admissions, Indiana University

WAR time demands for higher education burst like a bomb upon 1000 American college presidents at their Baltimore meeting last January called by the National Committee on Education and Defense. Commissioned and non-commissioned officers with college training would be needed by the thousands, the educators were told. An alarming shortage of doctors, dentists, nurses and engineers even then existed. Chemists, physicists, mathematicians, meteorologists, technicians must come quickly from the college laboratories.

FRANK R. ELLIOTT

The college presidents were urged to return to their campuses, omit vacations, work straight through Saturdays, accelerate their program to the utmost degree consistent with sound educational practices. And so began the program which within four short months has moulded American colleges into manpower machines for war.

The Accelerated Program

Now the boy learning to be a doctor may cut the seven-year course to four and two-thirds calendar years. Now the student of engineering or science may enter college in May and receive his diploma in December of 1944 rather than in June, 1946. About ten per cent of America's accredited colleges have adopted the three-semester-a-year plan. Many have increased their summer terms from six to twelve weeks. Others have chosen the year-around, four quarter system. Practically all have gone in for some form of accelerated training; this usually without sacrifice in total number of teaching days, or in teaching staff and facilities. True, students in the speed-up program will not have as much time as in past years to mature as they progress with their studies, but staid old Oxford in England is reported now to be awarding a war-time degree in five semesters. After all, THIS IS WAR.

Demands of Military Services

The military services are demanding speed and more speed in college training. The Army is dispensing with summer camps for R.O.T.C. boys so that they may carry on their basic and advanced work in the college summer terms. Camp experience will come soon enough after R.O.T.C. graduates receive their commissions as second lieutenants. The Naval Reserve has thousands of enlisted seniors and juniors in college training programs leading, upon graduation, to the naval officers' training schools and to commissions as ensigns. In addition, the Navy's more recent plans call for the enlistment of 80,000 college freshmen annually, some to be called into active service as seamen at the end of their sophomore or junior year, others to remain until graduation and then be commissioned as ensigns after three months in the naval officers' training schools. The Marine Corps likewise has seniors, juniors, even sophomores in college training subject to call for active duty after graduation, many of them as commissioned officers. A doubling of college enrollment in the Civilian Pilots' training courses is forecast.

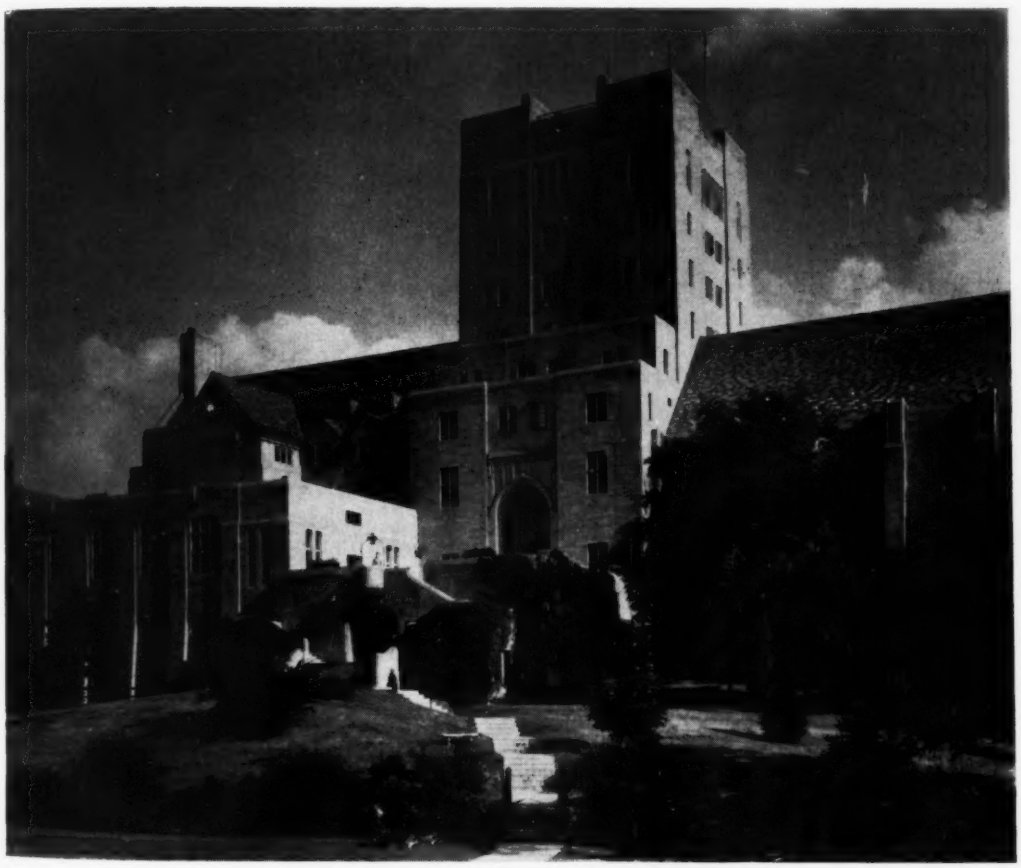
Many colleges have been designated for specific types of military training. Some are carrying on physical fitness programs for air pilots. Some will conduct summer courses in advanced acoustics for naval personnel. Other colleges will train experts in meteorology and diesel engine operation. A complete listing of colleges selected for special military training would be impossible since the list is constantly expanding and since some of this informa-

tion is confidential. When a college is chosen for special war training, it turns over classroom, laboratory and dormitory space, the latter at a reasonable compensation from the government.

Not only institutional aid but staff assistance as well are among the contributions of the colleges to the war effort. Specialists from the college faculties are lending their assistance, some members even commuting back and forth to Washington, meeting classes on the campus some days and meeting committees in Washington other days.

Curriculum Adjustments to Meet War Demands

Physical training in the colleges is greatly increased in view of shocking disclosures of the softness of America's young men. Some military experts have urged that the colleges devote as much as a third of the male student's time to body building gymnastics, to sports such as boxing, wrestling, swimming and to outdoor conditioning through body-contact games and cross country hiking—activities which develop muscles, produce physical stamina and prepare young men for the rigors of the field campaign. Training in personal hygiene, first aid and nutrition are considered of first importance to college men who are to take the responsibility of commissioned and non-commissioned officers and to college women who will have to help fight the epidemics which inevitably follow in the



Indiana University Memorial Union Building

wake of war. Both men and women students are stepping up their physical training.

In these days of machine warfare, major emphasis is being placed upon the physical sciences. Military men insist upon the urgent need for training in mathematics, physics, chemistry, physical geography, astronomy, mechanical drawing. They stress training in the applied subjects such as surveying, communication, explosives, navigation, map making, photography, weather forecasting.

Basic work in English, both written and oral, is always called for by those who will instruct and command. Foreign languages, social studies—especially current world history—are desirable subjects. Others of special importance in war time include the biological sciences, bacteriology, public health, home nursing, psychology, statistics, accounting, sociology, public relations, Latin-American institutions, government, transportation, business administration, personnel problems, secretarial and office practice, dietetics, social work.

Given a background of such training, the young man going into the military service develops an adaptive capacity which enables him to adjust to the amazing situations which modern war develops and to provide the right kind of leadership. A knowledge of social science shows that history repeats, that dictatorships run their course; such studies are bound to promote that balanced vision which is sorely needed in the present trying times and for the difficult post-war era to come.

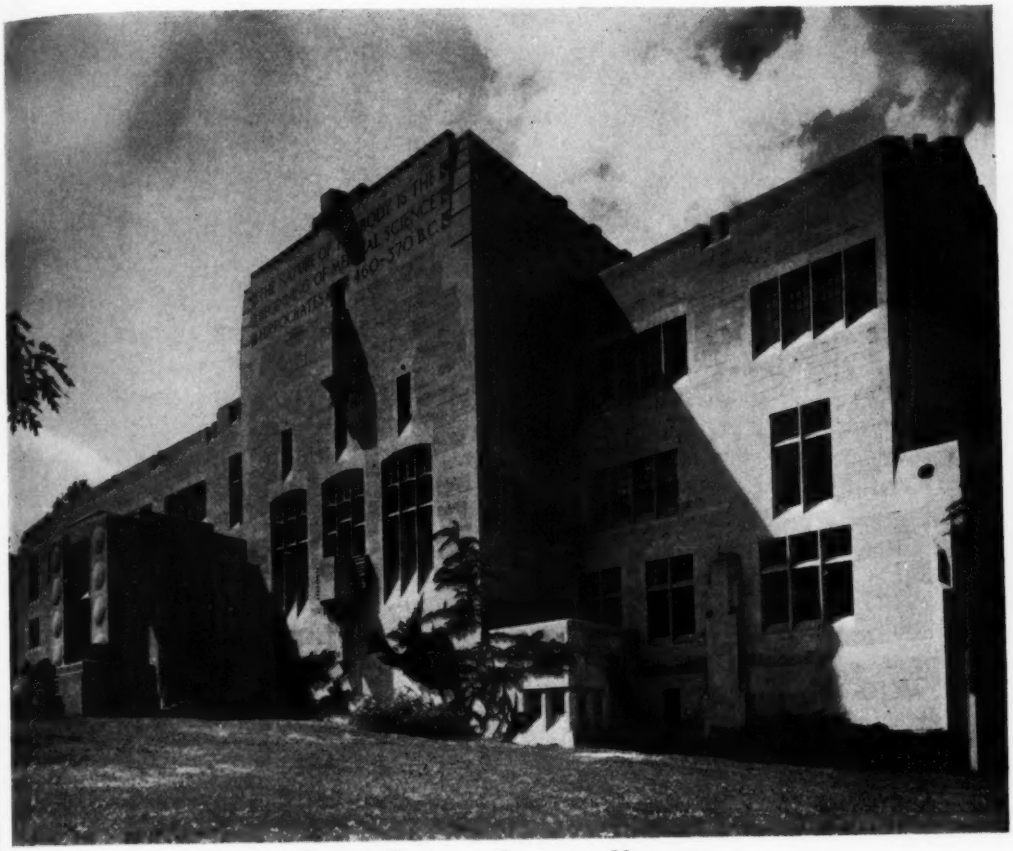
Importance of Education of Women for War-Related Activities

Nor is the demand on the colleges confined to the education of men. More and more it becomes clear that the womanpower of the nation must be mobilized for war service. This is necessary, for one reason, so that the manpower in the army training camps and defense industries may be released for service at the front. It is a generally recognized fact that trained women typists, stenographers and secretaries surpass men in efficiency. Trained women are needed as laboratory technicians; as accountants, statisticians and economists; as linguists; as personnel workers; as ground observers and calculators in aeronautics and navigation officers; in nursing; and in many other war-time fields.

The conference in nursing education last January in New York City heard a demand for 50,000 additional nurses in government and civilian services. The American Council on Education the same month reported that the War Department will need approximately 1000 young women laboratory aides at the rate of 100 per month for the next ten months. Women with some training in engineering are now requested by industries in all parts of the country to serve as junior draftsmen. Some schools of engineering are arranging special training for women in engineering and science fields. Indeed, increasing numbers of women are flying airplanes month after month. It is thus clear that the college education of women for war-related activities is one of the most important war-time demands on higher education.

Program of Summer Instruction for High School Graduates

Nor is all of this war-time training by the colleges confined to the college campuses. As part of the nation's Engineering-Science-Management-Defense Training Program, the United States Office of Education will carry on this summer a nation-wide, ten-weeks program of instruction in training centers off the campuses for high school graduates not planning to enter college this fall. College teachers will conduct classes in engineering chemistry, engineering drawing, industrial materials and processes, elements of engineering and mathematics. All costs of this training to help equip young men and women for industry,



Indiana University School of Medicine

much of it war industry, will be borne by the United States Office of Education excepting a maximum of $18 for texts and other materials. While the engineering colleges will carry on this training, other types of colleges will conduct field training in health, nutrition, distributive occupations, social service, home defense.

Young People's Demand for War-Time Training

While we thus see the American colleges rising to meet the demands of the Military Services and War Industries, those of us who are corresponding and counselling daily with prospective new students and their parents see a clear demand from them, too, for war-time college training. Not so often now do we find a parent laying out for his son or daughter a program of strictly classical education without regard to the exigencies of the present world situation. Sometimes, it may be, the parent is concerned with getting his son into a combined college-military training program, not so much for the purpose of training him for military usefulness in the defense of his country as for the purpose of deferring his actual entrance into the war just as long as possible. But usually students and parents seem imbued with a desire to study hard, to forget vacations and Saturday holidays, to make sacrifices, so that the young men and women may play their part in *higher* education for the war and after the war.

State boards of education and high school officials are generally cooperating by allowing seniors to finish their present semester's work in time to enter college in May. In some cases students lacking not more than two credits for graduation are being allowed to enter college and make up the high school deficiency there while carrying on about three-quarters of a normal college program. Very few colleges are accepting juniors. Secondary school faculties generally oppose it. They feel that their boys and girls are young enough as seniors. One principal ventured the opinion to the writer that colleges have not been so conspicuously successful in the adjustment problems of high school seniors as to be encouraged to try their hand with juniors. Some secondary school officials resent college acceleration, but most of them will cooperate.

The demand for youths in industry and the lure of high pay (some boys can step out of high school into jobs paying $35 a week) may cut down somewhat on the number of substandard and poorly prepared freshmen in colleges whose entrance requirements are as liberal as those of most state supported schools. Both students and colleges will often be better off for this situation.

Probable Decline in College Enrollment

College enrollment probably will continue to decline. It was off 9.16 per cent last fall as compared with that of the previous autumn, the first large decrease since the depression years of 1932-33, according to President Walter's annual nation-wide survey published in *School and Society Magazine*. The Selective Service Act and the demands for industrial workers probably were responsible. The smallest decreases were in the technological institutions (2.57 per cent) where students in engineering and science were often deferred under the Selective Service Act. Enrollment increased in such fields of deferment as engineering, medicine, dentistry, nursing and science. Enrollment declined very sharply in graduate schools of arts and science, in law schools, and in teachers' colleges and departments.

The decrease in freshman enrollment last fall was only 4.53 per cent as compared with 9.16 per cent for all classes. Freshman enrollment in technological courses was up 8.7 per cent; in business and commerce, off 2.7 per cent; agriculture, down 9 per cent; teachers' courses, off 17.8 per cent. Enrollments in the Axis foreign languages, German and Italian, and in French are down, while enrollment in Spanish is up 100 per cent in some colleges.

Student Aid as Factor in Enrollment

Whatever the federal government does with reference to student aid is bound to affect college enrollment. In spite of higher incomes, there will still be the orphans, the children of widows, the sons and daughters of parents temporarily out of employment, the boys and girls from large families and those who no longer have the usual opportunities for summer employment if they are to go to college the year around. Whether or not they can start war training in the colleges for medicine, dentistry, nursing, engineering and science will often depend upon whether or not the government continues N.Y.A. employment. College N.Y.A. has been a great boon to poor students, of great assistance to the colleges, and one of the most valid of all relief measures. Some arguments are being advanced for its discontinuance while other proposals call for government loans of $300 per student annually or outright government scholarships for those definitely engaged in college war-training. Thus far the military services are opposed to military pay for enlisted men who are deferred for further college training.

The Post-War Period

We may look for a tremendous flood of enrollment when the war is over. The younger

soldiers will return in many cases to college just as they did after the first World War. Other young people who put off their education for the temporary profit of a war-time job will see later that theirs was a penny wise and pound foolish policy; they will be back if it is not too late. It will be a tremendous task for the colleges to help balance post-war employment demand and supply.

What effect war-time demands will have on the future pattern of American higher education is somewhat difficult to predict. It seems probable that the position of mathematics and the physical and biological sciences will be enhanced. The classical and romance languages, excepting Spanish, are in for a decline, if only temporarily. Emphasis on applied knowledge is likely to grow at the expense of abstract learning, although the soundness of the latter is emphasized by our leaders in fitting young people to command in war and to lead in the reconstruction.

Whatever the uncertainties of the future, American colleges are in this war. They are in it because they believe the permanent survival of democracy depends upon educated leadership. They want American boys and girls of intellect and ambition to have their chance for a higher education before they go to war. But, first of all, they want to help train young men and women to go into this war and take the lead in winning it.

NEVER before in the history of the country has there been greater demand for the trained man or woman. Such a demand can be met only by young men and women continuing their studies to become chemists, physicists, or metallurgists; doctors, dentists, or nurses; or engineers, or teachers of languages, mathematics, or sciences.

THE UNIVERSITY OF PITTSBURGH

Address the Registrar

CAREER IN ENGINEERING*

LOWELL O. STEWART

Professor, Head Civil Engineering, Iowa State College, Ames, Iowa

The Need for Engineers

LOWELL O. STEWART

EVERYONE is familiar with the results of the engineer's work. Although we may not have a clear picture of the actual details of that work, we do know something about the products and structures that he makes. Now that we are in the war, we see more clearly than before how important the engineer is. This covers all areas, on the firing lines, on the seas, in the air, and in the factories.

The army has its engineers, both military and civilian. The former lead the way in an attack, building bridges across streams, building highways, railways and airfields and establishing lines of communication. The civilian engineers in the army make river and harbor improvements, such as the development of the channel of the Mississippi, make drainage and flood control studies, improve harbors, build airports.

The Navy has an Engineering Corps, also. It builds docks and wharves and sea bases for ships with all of the machinery and other equipment that must be on hand to service the naval vessels and sea planes. In wartime these engineers are placed on works that are of immediate use in carrying on the war.

Behind the lines where materials are being prepared for the fighting men we find engineers in stronger demand than at any time since 1929. There are not enough to supply the needs of airplane factories, the makers of heavy equipment such as tanks and guns, the shipyards, the explosives and munitions plants, the makers of delicate instruments, the builders of camps and factories, and dozens of others.

This need for engineers in vital places behind the lines and on the battle front presents a challenging problem to young men who are making plans for the future. They must consider the immediate necessity, which is winning the war, as well as the long range question of a permanent career. Many will be impelled by patriotism and the urgency of the war's demands to enter the armed forces at once. Yet it is very clear that engineers in the factories that supply the fighting forces with equipment are essential also. Obviously, this is true in many other fields such as medicine, agriculture, seafaring, airplane piloting.

A moment's deliberation shows that we must have men trained to take up work in the years ahead. Considered from the standpoint of a long war or a short war, we see the future need for many men with complete engineering educations. So those men who do continue their engineering educations to completion are performing an essential service. If the war is long these engineers will be needed to carry on the research, design, manufacturing and construction that the war effort will require. If peace comes soon there will be the immense problems of reconstruction that are involved in changing to a peace time program and in rebuilding areas destroyed by war.

All of this seems to lead to one conclusion, namely, that now is a good time for a young man to start upon an engineering career. For a while many men at the lower end of the scale in aptitude may find ready employment.

The long term trend will be toward steady raising of the requirements for entrance into

* A short abstract of book by same author, "Career in Engineering—Requirements, Opportunities," Iowa State College Press, Ames, Iowa.

the profession. A close study of the opportunities and requirements for success in engineering is essential for those who are interested in a career in that field.

What Is Engineering?

Engineering is a combination of a profession, a trade and a business. Within its ranks may be found men whose abilities, education and training extend from that of the most advanced scientific and technical type to that of the practical "school of experience" type. Engineering enterprises require the services of three groups of men, each of which has its definite characteristics and areas within which it can perform most usefully. These groups are the professional engineer, the technician and the skilled artisan. Actually, each group does not operate within exclusive and restricted boundary lines. The groups merge and mingle and many men are continuously in the process of raising themselves from a lower to a higher level.

Artisans

The skilled artisans or craftsmen, frequently known as the skilled trades, occupy a very important place in our industrial program. Although the primary characteristic is manual skill, the success of a craftsman depends also upon his technical knowledge and the sound judgement which he exercises when he makes decisions. Many intelligence tests have shown that successful skilled craftsmen rank above the general average in intelligence and that the best of these are near the professions at the top of the intelligence scale. This observation on the importance of intelligence should be noted by those who think that a man who has failed to master an engineering curriculum in college may, with certainty of success, turn to a trade.

Technicians

Engineering technician is a class name which covers a large number of classifications at the entrance to the field of the professional engineer. The work includes surveying, drafting, inspecting, testing, laboratory analysis, time keeping, cost keeping, time and motion study, servicing and selling, and others. Obviously, these jobs are so closely related to the important work of industry that it would be difficult to draw a line separating technicians from engineers. There is a wide common band or twilight zone in which both technicians and young men who will become engineers are employed. Some stay in this area by choice; others because of aptitude, interests or limiting factors, find it necessary to remain.

There is a large annual unfilled need for men to do this technical work. At the present time our program of technical education in the United States does not make specific provision for the selection and training of men to fill these positions. Many come from the ranks of the four-year engineering college graduates or from the group which did not complete requirements for the B.S. degree.

A Student Engineer Using a Transit

In some industrial centers short, practical and intensive courses of study lasting from one to two years have been designed to prepare men for immediate assimilation into an industrial organization.

Engineers

We come to the question, when does a man become an *Engineer?* Certainly not upon graduation from an accredited engineering curriculum, although this is an essential prerequisite. He progresses through the work in the technician areas. He shows considerable ability in the application of fundamental principles of science to the solution of problems which may be highly technical, requiring research or ingenious and complex design; or they may involve questions of administration, management, organization, or economy.

For the majority of engineering graduates, particularly those who enter industry, there will be no arbitrary answer to our question. Possibly the nearest thing to an answer will come in the salary received. Below a certain figure will be the technicians (omitting craftsmen from this discussion); above that figure will be the *engineers.*

There is a legal answer which has been imposed by about forty states. In those states a man who practices engineering (which has been defined by the law) must obtain a license to practice. To do this he must meet certain specifications as to education and experience and pass a written and oral examination.

Who Should Study Engineering?

The field of engineering is very broad and there are good opportunities for work for men with rather wide ranges of aptitudes and interests. Moreover, an engineering education is a very useful preparation for a business career. There are aptitudes and interests significant for engineering which should be discussed.

As a rule anyone who can complete the educational requirements for graduation from an engineering college can find a position in engineering which he can fill satisfactorily. For this reason we estimate a man's probable success as an engineer in terms of his ability to graduate. That is to say, if he cannot do the engineering course work, he cannot graduate and, therefore, cannot become an engineer.

Mathematics

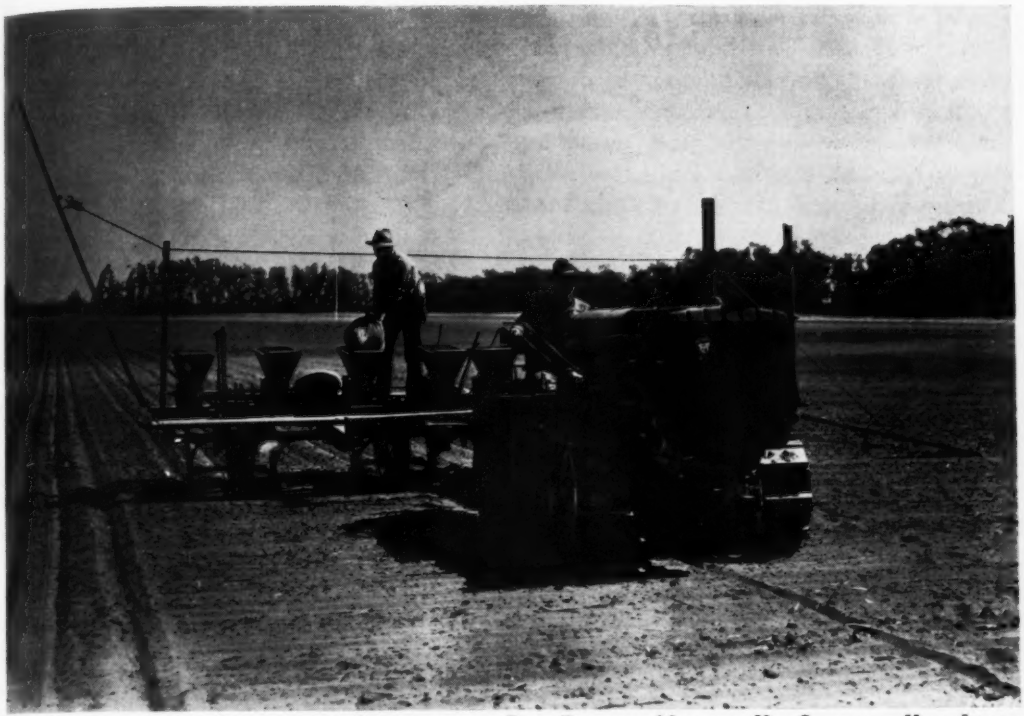
A man's aptitude for learning higher mathematics such as algebra, trigonometry, analytic geometry, calculus and their applications is the most significant index of his ability to succeed in an engineering curriculum. The reasons seem clear. Mathematics and its applications appear throughout the engineering curriculum. To be successful in higher mathematics one must have the ability to reason clearly, accurately, and logically. He should be orderly and systematic. If a man's grades in high school algebra have not been above average, it is probable that he will have to work very hard to master college mathematics.

Visualization

Space visualization, which is the ability to perceive the sizes, shapes and relations of objects in space, and to think clearly about those relations, is an important asset to an engineer. However, men who have this trait weakly developed master an engineering curriculum without serious difficulty; and after graduation they may choose fields of work where lack of that ability may not be a serious handicap. This ability may be rated as a *plus* value. A man can get along without it but he will be a stronger and better engineer with it.

Manual Skill

Aptitude for acquiring manual skill, that is, the ability to perform operations with one's hands with considerable dexterity, is a very useful but scarcely essential trait for an engineer. It, like space visualization, is a plus quality.



This Development of Agricultural Engineering, a Bean-Planting Machine, Has Saved the Hard Labor of Many Men and Does a Better Job Than They Could Do

Interest

Interest and aptitude are closely related and it is difficult to say which comes first. Interest for engineering may be measured by (1) use of vocational interest blanks, (2) an analysis of the type of studies liked in high school, and (3) working during vacations on the types of things that engineers do.

Personality

Engineers find work in many fields so it would be difficult to point to any particular type of personality as peculiarly essential for engineering. There are certain traits that an engineer should have. He should have a liking for accuracy, for exactness, and for detailed and persistent study. He must have patience and persistence. Nervous and erratic people even though mentally keen are apt to become impatient. He must be honest in the sense that he can weigh facts judiciously and arrive at a fair result. He should have a sound and healthy body because some of his early jobs may be hard and exacting. Obviously, he should have his share of those traits which are important for success anywhere such as judgment, common sense, initiative, resourcefulness, thoroughness, efficiency and others.

What the Engineer Does

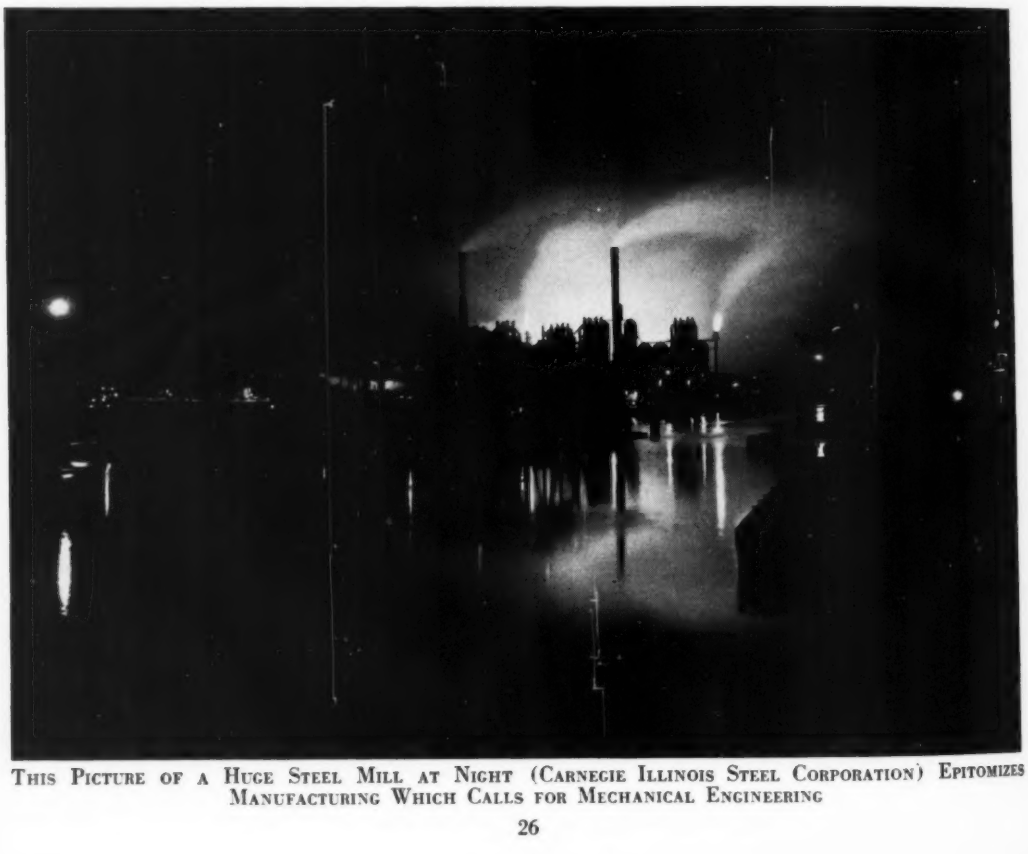
We may view the engineer's work from three angles. First, there is the familiar departmental division such as Civil, Electrical, Mechanical, etc., Engineering; second, we have classifications by industries, such as automotive, construction, petroleum, public utility, steel and others; finally we can classify his work according to the functions performed, such as design, research, development, and sales.

Degree Granting Departments

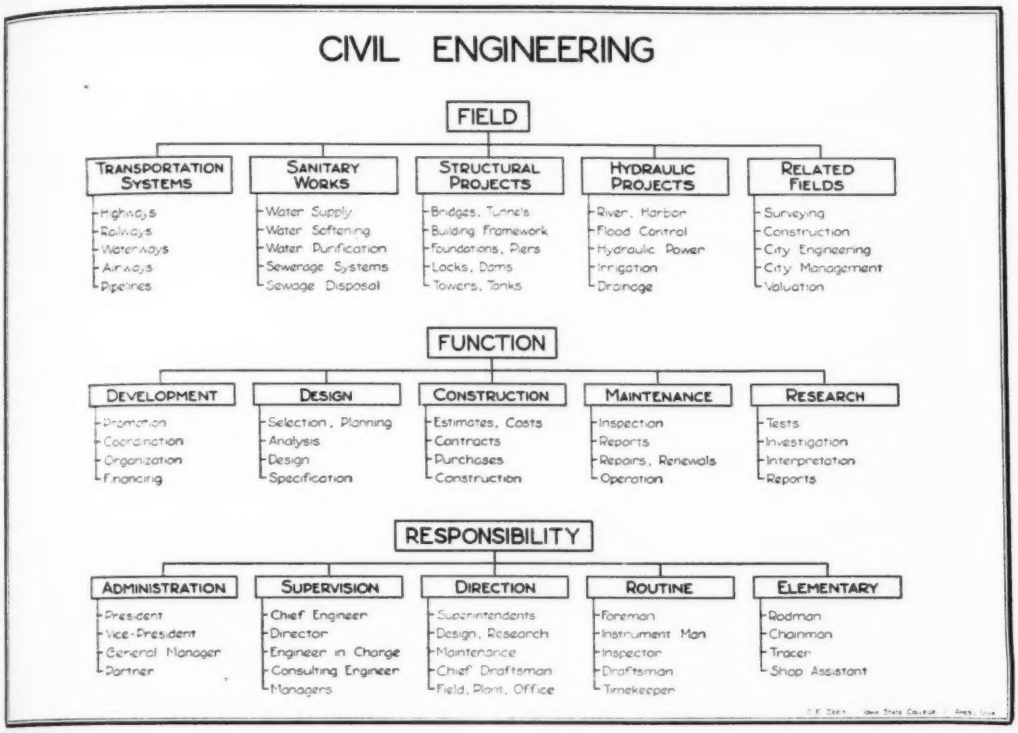
The best known classification of the engineer's work is that which groups it by degree-granting departments. In these departments the programs of courses of study, which are commonly known as curriculums, grow out of the educational needs of engineers in the field. The first two years of the curriculums have a common core of subjects such as mathematics, chemistry, physics, engineering drawing, English, economics. Work of the last two years diverges markedly as the programs of the professional courses are developed within the departments.

These degree-granting departments may be separated into two classes based upon the areas of work into which the graduates go. They may be listed as, (1) civilian or non-industrial, (2) industrial or manufacturing. This classification has exceptions but it will be useful to anyone who is seeking the department that he will like and for which he is best fitted. In the civilian or non-industrial group are Agricultural, Architectural and Civil Engineering. In the industrial or manufacturing group are Ceramic, Chemical and Mining, Electrical, and Mechanical. Using this basis of analysis a young man may make a general selection of the type of area in which he will work. If he chooses Agricultural, Architectural or Civil Engineering he may, as a general rule, plan to spend his life working on projects that relate to our non-industrial civil activities.

For example, the Agricultural Engineer engages in drainage and soil conservation, the development and use of agricultural machinery, farm management and operation, the planning and construction of farm buildings and the related water, light, heat and waste



THIS PICTURE OF A HUGE STEEL MILL AT NIGHT (CARNEGIE ILLINOIS STEEL CORPORATION) EPITOMIZES MANUFACTURING WHICH CALLS FOR MECHANICAL ENGINEERING



disposal. The Architectural Engineer plans, designs and supervises the construction of buildings and engages in related sales and services. The Civil Engineer is engaged in planning, designing and building works and structures in transportation, bridges, water supply, sewerage, river and harbor improvements, dams and reservoirs, surveys and maps.

Our second group of engineering departments, in which are Ceramic, Chemical, Electrical and Mechanical Engineering, trains men to go into the manufacturing fields, primarily. This covers a tremendously large range of products and calls for many kinds of functional activities. Any young man who chooses one of these curriculums may expect to make his career in some work related to manufacturing which means working in or near a factory.

Industries

The second classification of the engineer's work is by industries. Here we may find in one industry engineers from several of the departments. Examples of industries are Automotive, Aviation, Food Technology and Manufacturing, Petroleum, Radio, Railway Engineering, Refrigeration and Air Conditioning, Rubber, Steel, Telephone, Federal, State, County and City Governments, and many others.

Functions

Our third general classification of the engineer's work is by functions, which cut across departmental and type-of-industry classifications. Examples will show what is meant. Functional occupations include research, design, development and experimental, construction and manufacturing, operation, sales and service. Obviously, the abilities required to carry on a functional activity are independent of those required for success in a departmental classification, such as Civil or Electrical, or in an industrial classification, such as Automotive or Rubber. Moreover, the functional classification is basic and fundamental in its approach to men's aptitudes.

MAN OF WAR

PETE is a quiet, peace-loving man. Treats his family fine and pays his bills and gets along with his neighbors. Hasn't struck a blow in anger since he was a kid and caught another boy mistreating a dog.

But today Pete is mad clear through. You'd never guess it to see him at home; if anything he's quieter than ever. He isn't the kind to go around gritting his teeth and calling names.

When you see him at work, though—then's when you realize the difference. For there's a deadly precision in the way he goes about his work. He's on the job a little before starting time; he pays more careful attention to what he's doing; he knows what he's building and for whom he's building it. And that's why he's probably the most dangerous, the "fightingest" enemy the Axis powers have.

For it's men like Pete—who feel the way he feels, who are doing what he is doing—who are manning the machines in America's factories today. And they're turning out the deadliest, most effective array of weapons the world has ever seen.

There are a lot of men like Pete among the 125,000 General Electric employees these days. In their off hours you'll find them acting as air-raid wardens in their communities. You'll find them among the more than 100,000 G-E men and women who, without any fanfare or hurrah-boys, have signed up for U.S. Defense Savings Bonds to the tune of more than $20,000,000 a year. But most important of all, you'll find them on their job—doing what they know best and giving it the best they've got.

Quiet, peaceable, determined men of war. They're the men who, a few months ago, took pride in building refrigerators, radios, washing machines, and all the other contributions of electricity to peacetime living. Today they're putting their whole heart into the building of grimmer things—so that they and all of us may the sooner pick up the never-ending job of making better things for a better America. *General Electric Company, Schenectady, New York.*

GENERAL ELECTRIC

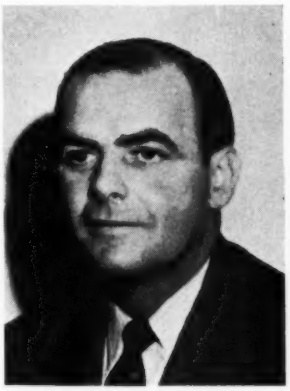
952-313E1-211

MILITARY POLICIES IN EFFECT IN INDUSTRY

R. H. MACY & CO., INC.

WILLIAM E. BYRD, JR.

Manager, Executive Placement and Training



WILLIAM E. BYRD, JR.

ALL employees of R. H. Macy & Co. who enter military service, for any reason whatsoever, may return to Macy's employ upon completion of their training period. They will be reinstated to active employment in the same position they previously filled, or in one of comparable rank, and at the same salary that they received at the time of their departure. Positions vacated will be filled on a temporary basis and incumbents advised accordingly. Every effort will be made to locate permanent positions elsewhere in the company for the temporary appointees when the military trainees return. All employees who enter military service, and who at the time of leaving the store have completed six months of regular full or part-time employment are given four weeks' salary in order to assist in the adjustment from civil to military life. For those employees who have group insurance as of the time of leaving, Macy's will continue for one year and six months the individual policy in full effect without cost to the individual. Employees in military service retain the privilege accorded to all employees of a 20 per cent allowance on clothing purchases. This allowance applies to uniforms carried in the uniform shop of the store.

Macy's hired twenty-seven 1941 college graduates for training in merchandising and store management. The policy set forth above will apply in case any of these employees are called for military service. In recruiting during the past year we endeavored to keep the question of military service in the background until the time of final selection so that our judgment would be based solely on qualifications for the job—which is the primary long-range consideration. At the time of final selection if the individual advised us that he was fairly certain of being called for military service in less than six months from the date for employment to begin, we offered him temporary employment, if it was feasible, in specific jobs such as sales and service managing. This afforded the individual an opportunity to gain experience in retailing even though he was subject to call for military service in the near future. Men who were not available at graduation, but who wish to be considered for permanent employment upon their return to civilian life, will be welcome to reopen the matter at that time. Macy's expects to continue college recruiting in 1942, adhering to the same general policy as outlined.

MEN WANTED!

To train for leadership.
A liberal arts college
offers preparation for
Medicine, Science, Ministry,
Teaching and Business.
Defense courses, Civil
Aeronautics, Cadet Corps.
3- and 4-year program.
Degrees — A.B., B.S., and
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June 22 — Aug. 1.
Aug. 3 — Sept. 12.
Limited enrollment.
Placement Bureau, Dormitories.
155th Year. Write to

FRANKLIN & MARSHALL COLLEGE

1787 Lancaster, Pa. 1942

SOCONY-VACUUM OIL COMPANY, INC.

P. W. BOYNTON

THE Military Training Policy terminated with the declaration of war, and the Company has now adopted a plan for employees in active military service, which will be considered as having been in effect since the outbreak of war on December 7, 1941.

P. W. BOYNTON

The following summary covers the provisions of the plan:

1. Regular employees on December 7, 1941, with six months or more of continuous service who are in or enter military service will be given a leave of absence for the duration of the war.

2. Each employee entering military service will be given two months' full pay less employee contributions for annuity and insurance under the Metropolitan Plan. Provision has been made against duplication of benefits in respect of men who received pay benefits under the Training Policy.

3. Full Metropolitan Plan coverage will be maintained for the first two months of service. After the first two months, life insurance coverage under the Metropolitan Plan will be provided without cost to employees. The provisions summarized in this paragraph apply to all employees whether with or without dependents.

4. The Company will provide for each employee without dependents, and without cost to him, the annuities that would have been purchased after the first two months of service unless the employee receives from the Government an allowance in excess of 50 per cent of his Company compensation, in which case, the employee will pay for such annuities on returning to the Company's service.

5. For each employee with dependents, the Company will (1) pay to the employee or his dependents for the period of military service following the first two months 50 per cent of his Company pay, less governmental pay and allowances, and (2) provide, without cost to the employee, the annuities that would have been purchased after the first two months of service unless 50 per cent of the employee's wage or salary exceeds the employee's Government pay, in which case the employee shall pay for such annuities.

6. The plan provides for reinstatement and seniority benefits which are substantially the same as those granted in the former Training Policy.

7. Owing to the uncertain conditions confronting the Company, the plan is necessarily subject to change or revision and in no event will the aforesaid pay or Metropolitan Plan benefits be continued in respect of service after July 1, 1942, unless the Company so provides by extension or revision of the plan.

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AMERICAN STEEL AND WIRE COMPANY

M. E. NICHOLS

Personnel Manager

THE American Steel and Wire Company has, for many years, followed a practice of inducting a limited number of college trained people into the organization each spring. These graduates are recruited with definite plans for training them to fill positions which will utilize the knowledge and skills acquired in college. Because of the many complexities of the steel industry, a considerable period of orientation is necessary for the recent graduate to become sufficiently familiar with materials, equipment, personnel, products and practices to use his technical education to advantage. A planned program combining varied work experience and supplementary study of the manufacture of steel and wire is used to bridge the gap.

M. E. NICHOLS

The orientation training program for graduates has been materially shortened since the outbreak of hostilities. Instead of providing general background training in several phases of the industry, the program for a given individual is now limited to those operations directly related to the position he is being trained to fill. This has made possible a reduction in training time from 12 or 18 months to 6 months. The trainee must intensify his efforts, often doing outside of working hours some of the things that were formerly included in the normal schedule. This, however, is consistent with the "plus effort" requested of all.

Graduates who have successfully completed the induction or orientation program are placed in positions which provide opportunity to use both the knowledge acquired in college and the experience gained during the induction program. Those who continue to show promise of assuming progressively more important positions are classed as key men in the organization and requests for military deferment filed with local draft boards. In the case of new recruits who are not yet on essential jobs but who are in training for such jobs, deferment is also requested. These requests are based on the fact that they are in training and that persons with their education and personal qualifications cannot be secured as replacements.

Despite greater production, seniors from the 1942 graduating class are being recruited in approximately the same number as has been the company practice in recent years. The total technical personnel is thus being kept at a level that should permit re-employment of all graduates who have been given leaves of absence for military service.

Student earnings through the Student Laundry Agencies of the University of Pennsylvania last year exceeded

$1000

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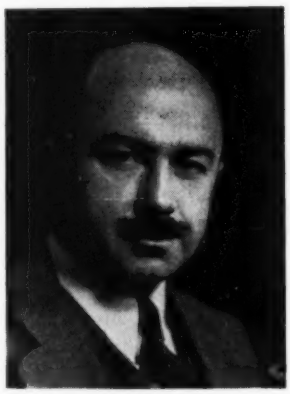
THE COMBINATION OF CAREER TRAINING AND A PROGRAM OF SERVICE FOR GOVERNMENT

STEPHEN B. SWEENEY

Director, Institute of Local and State Government, University of Pennsylvania

THE experience of the Institute of Local and State Government, although perhaps not so long as it has been intensive, indicates that training young men and women for careers in governmental administration is strongly benefited by a simultaneous service program carried on by the same organization. It may even be contended that it is difficult for one of these to be successful without the other.



STEPHEN B. SWEENEY

The Institute was founded at the University of Pennsylvania, July 1, 1937, as a result of a generous anonymous gift by a prominent Philadelphian long interested in the improvement of municipal government. Previous to the formal establishment, plans for providing direct services to municipalities for training governmental personnel had been steadily maturing at the University. Under the stimulus of Joseph H. Willits, then Dean of the Wharton School, conferences among interested persons at the University had been held as early as 1936. A grant of $240,000, which was to support the Institute for its first six years, made possible the fulfillment of these plans, and provided the University immediately with multiple opportunities for public service.

In order to draw up a concrete program and to be certain that it would be comprehensive, useful to local officials, and also flexible, a series of meetings of specialists in the field of government and administration was arranged. Those attending represented in these two fields a wide diversity of background, doctrine, and practice.*

The General Purpose Behind the Establishment of the Institute

While the organizing conferees prescribed a definite and specific program for the Institute, they were pursuing an abstract and general objective: to preserve and strengthen American democracy in the place where it is demonstrably weakest, that is, in local government. Democracy is essentially a system for small units, and American statesmen of this and earlier days have not been unaware of their service to democracy, when they made a division of American government into three levels and a division of these levels into three or more branches. This loose linked and semi-autonomous structure is essential to the continued existence of American democracy, but it can last only so long as the member parts retain a capacity to solve their own problems. If the multitudinous local cells of the American body politic lose their individual health,

* Among the conferees from the University of Pennsylvania were: Thomas S. Gates, *President of the University;* George William McClelland, *Provost of the University;* Clyde L. King, *late Professor of Political Science, Wharton School;* Harry J. Loman, *Director, Graduate Course in Business Administration, Wharton School and Associate Dean of the Wharton School;* Charles C. Rohlfing, *Chairman of the Political Science Department, Wharton School;* Alfred H. Williams, *then Dean of the Wharton School, now President of the Federal Reserve Bank of Philadelphia;* Joseph H. Willits, *then Dean of the Wharton School, now Director of the Social Sciences, Rockefeller Foundation;* G. Lloyd Wilson, *Professor of Transportation and Public Utilities, Wharton School;* James T. Young, *Professor of Public Administration, Wharton School.*

Other experts attending the March, 1937, conferences were:

Clarence A. Dykstra, *then Manager of the City of Cincinnati, now President of the University of Wisconsin;* Charles E. Fox, *attorney lately prominent in Philadelphia civic affairs;* Luther A. Harr, *former Secretary of Banking for Pennsylvania, Treasurer of Philadelphia;* Joseph P. Harris, *Director of Research, Committee on Public Administration, Social Science Research Council;* Lloyd M. Short, *Director, Public Service Training Center, University of Minnesota;* John F. Sly, *Professor, School of Public and International Affairs, Princeton University;* Harold D. Smith, *then Director, Bureau of Government, University of Michigan, now Director, United States Budget Bureau.*

and must be sustained artificially by the central organism, it will not be long before the central organism itself collapses.

Just as the duties and responsibilities of the Federal and state administrations become more bewildering year by year, so the previously simple and routine functions of local governments become more and more complicated and expensive. This is especially noticeable in the smaller communities, where the official personnel is usually not expert in the technical aspects of local administration. The founders of the Institute felt that this technical advice and service can be supplied, and that the spirit which must animate this vital department of democratic government can thus be strengthened.

To do its part, then, to help make American democracy strong, in a world becoming less and less democratic—this is the fundamental purpose behind the founding of the Institute.

The substance of the discussions in the conferences leading to the founding of the Institute was that the new service unit should be useful to the local officials but that it should also be unique. That is, it should not duplicate the activities of purely research agencies, nor confine itself to education and training, nor concentrate on governmental economy, nor merely investigate civic conditions and make reports, nor set out on the path of municipal "reform." It was decided finally to leave public economy, exposure of official wrong doing, advocacy of controversial measures, and the militant type of reform generally to existing organizations, and to try to achieve supplementary objectives, which at the same time would constitute a rounded and homogeneous program.

The Institute's Three-Fold Objective

Predicating its services on the theory that the best way to improve local government and administration in Pennsylvania is to help existing local officials to do the things they are now trying to do, the Institute was organized to provide three services simultaneously: (1) to train young persons for future service as public officials, and educate others in their civic rights and duties so as to make them better citizens; (2) to provide technical advice and assistance directly to local and state officials; and (3) to conduct research on problems of local and state government.

The Interdependent Nature of the Objectives

As the organization began to function, it was soon demonstrated that these three objectives are interdepedent, not only as they affect the public official, but also as they have been progressively worked out by the Institute staff. The best method of training young persons for public service, once the academic groundwork has been laid, is that of having them learn by doing. Hence field service functions and field apprenticeships each support the other. In accepting specific assignments from local or state governments, the Institute at once serves Pennsylvania communities directly and helps to train students for service later. Supplementing both of these activities, the library and its staff of workers, acting jointly as a research service center, contributes to their success and is itself helped by the practical contact.

This cohesive development of the objectives of the Institute testifies to the soudness of the plans laid by those who established it.

The Training and Educational Objective

In the Institute's educational program, provided for those interested in learning the technical aspects of the public service, three distinct groups are served: students who are looking to the public service as a career; those already in the employment of governmental units; and adult citizens who wish to become better informed on local and state governmental affairs.

The pre-service training program for undergraduate apprentices and graduate students

of the University provides actual experience in government offices, under the direction of the Institute staff, and is integrated with the academic studies of the student. Round-table discussions led by government officials, seminars of the graduate school type, and courses in the Wharton School collectively shape the student's conception of local and state administration. By integrating laboratory experience in local government offices with practical discussion and academic study, the student gets a balanced introduction to public service.

A second part of these activities in public service training is the "short course" provided for those already in governmental service. Brief but intensive courses and seminars are arranged for those engaged in specific government activities. The study of the particular field is supplemented by an extensive exchange of the ideas gained through practical experience. This "in-service" training is coming to be recognized more and more as an essential aid to efficient administration. The Institute is cooperating with other training agencies in Pennsylvania which are fostering this self-improvement of government personnel.

Adult citizenship training is the third part of this educational program. These courses of instruction and inspiration are usually given in cooperation with established groups of citizens with some common purpose, for example, Rotary and civic clubs.

The Direct-Service-to-Government Objective

Direct services have been performed for numerous public agencies by the Institute, including several Pennsylvania state agencies and many units of local government, including Philadelphia. In these cases specific problems of the particular unit were studied and analyzed. When requested, the staff, working in close coordination with local or state officials, indicates means of improvement on the basis of its findings.

The Governmental Research Objectives

To facilitate both its direct services to governmental units and its public service training program, the Institute has established a Research Service Center for students, local officials, and interested citizens. This includes a carefully selected collection of contemporary printed materials relating to problems of local and state government, modern local administrative techniques, and books and periodicals in the general field of public administration. At this Research Service Center, students, public officials, and citizens study and conduct preliminary phases of research with the assistance of staff members.

Pre-Service Training

The training program of the Institute of Local and State Government is divided into three major classifications: Pre-Service Training, In-Service Training, and Adult Citizen Education.

The major purposes of the pre-service training program are to combine practical experience in government work with academic study, and at the same time to facilitate, by applied graduate research and apprentice assignments, direct services to local governments.

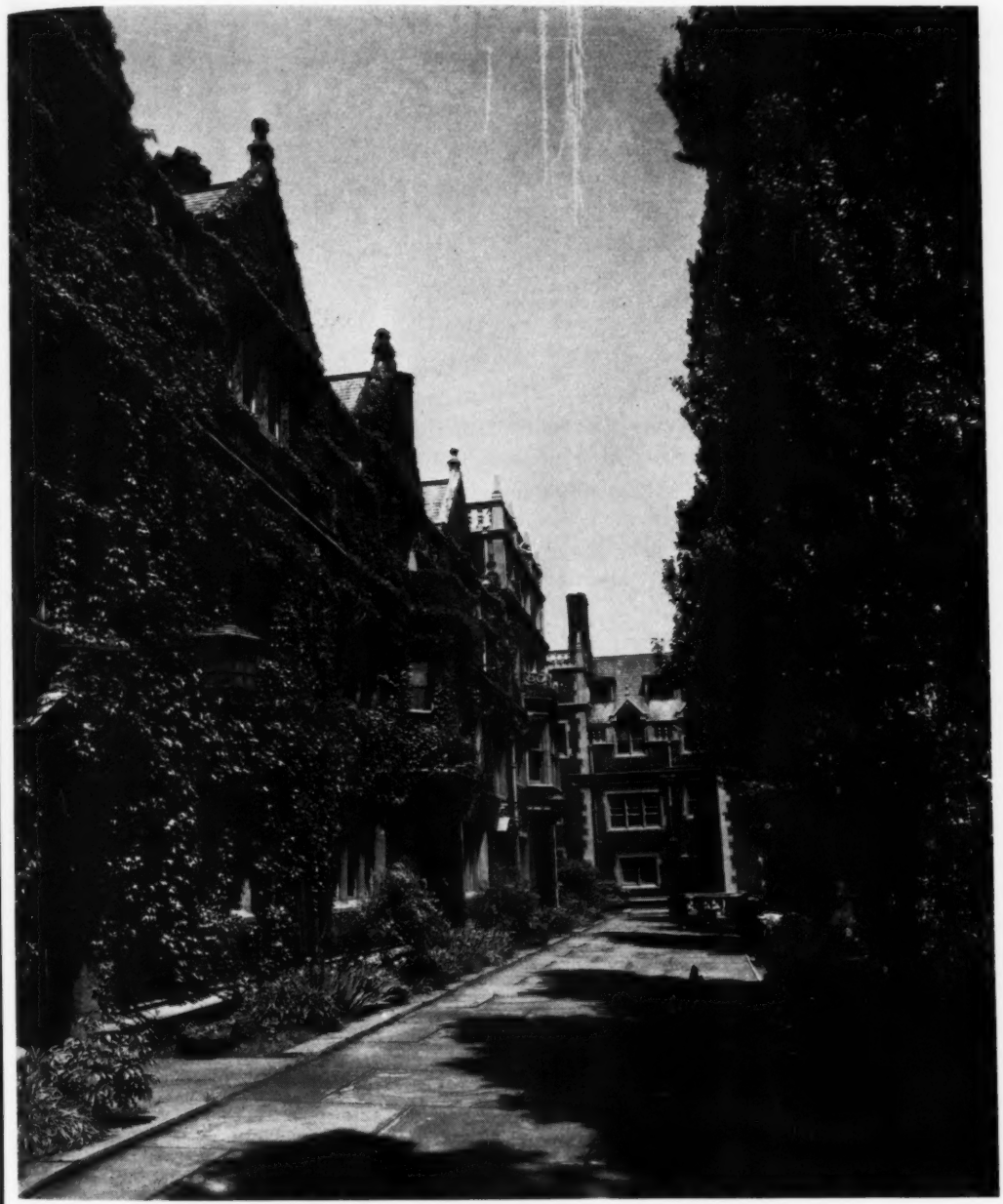
There are now three classifications of University students associated with the Institute:

(1) Undergraduate apprentices and alternates (sophomore and junior class members).

(2) Undergraduate assistants (senior class members).

(3) Graduate Government Majors (in the Graduate Division of the Wharton School of Finance and Commerce—most of these Majors are Fels Scholars).

It was originally determined by the Institute Board that the formal pre-service training program should be established on the graduate level. Academic credit for study and



A View of University of Pennsylvania Dormitory Quadrangle

work performed under the Institute's direction is accordingly given only to graduate scholars. Undergraduate apprentices and assistants receive no credit, but like graduates they are assigned work in government offices under the direction of the Institute staff. The Graduate Government Majors are candidates for the degree of Master of Business Administration with a major in Local and State Government Administration. Though their train-

ing emphasizes Pennsylvania government, their courses are shaped to include basic training in public administration. At the completion of the academic year, graduates are assigned to government offices or public agencies, where they work approximately half time, and are occasionally paid in proportion. During the summer internship, graduates write their master's thesis, which is based on studies supplementing their internship employment.

The Samuel S. Fels Graduate Scholarships

In the fall of 1938, the University created a limited number of graduate scholarships in Local and State Government Administration. These were placed at the disposal of the Institute in connection with its formal pre-service training program in the Graduate Division of the Wharton School. In the spring of 1939, these were officially designated the Samuel S. Fels Scholarships.

The Scholarship award consists of the annual graduate tuition fee of $325.00 plus group living accommodations. The present policy is to have eight to twelve Fels Scholars annually. Scholarships are primarily limited to those interested in a career in Pennsylvania government. Nevertheless, applications from students of other states are also given careful consideration. The major purpose in establishing these Scholarships is to combine academic training with practical experience in government.

The selection of Fels Scholars from the large number of applicants each year is a painstaking process. A general announcement of the graduate program and Fels Scholarships is sent to colleges and universities. Many applications are received—some from distant states although the announcement stresses the Institute's concentration on Pennsylvania government. Each applicant is thoroughly examined. Aptitude and psychological tests, oral interview ratings, academic credentials and research papers submitted by the applicants serve as a basis for selection.

The Three-Sided Training Program

The Institute offers its training program as a part of the Graduate Division of the Wharton School because of the conviction that training in government administration is most serviceable to the prospective employer if built on a foundation of technical business courses. This conviction is based upon several considerations. The first is that the practice of most technical and professional skills in the local and state government service is not sufficiently different from their practice in private enterprise to warrant a completely distinct course of preparation. Accounting, engineering, law, etc., are, in government employment, essentially what they are in private employment. Secondly, the demand in public service, especially at lower levels of government, is primarily for technicians or technicians with administrative training rather than for persons with administrative training alone. Hence for persons interested in local and state government administration the chances for entering public employment are greatly enhanced if they possess, in addition to administrative training, a technical skill which can be immediately utilized. This is especially true of younger persons who have completed their formal education, but are not sufficiently experienced to be entrusted with administrative responsibilities.

The program of training by which the Institute intends to achieve its objectives is separable, roughly, into two parts. The first consists of the more or less formal, systematic study of local and state government administration. The scope of this study includes (1) a survey of existing governmental structures with a view to discovering underlying principles of organization and management, (2) a review of the factors which differentiate the practice of government administration from

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private management, (3) an analysis and an evaluation of existing government and administration organization and practices to determine their justification, their efficiency, and the means for their improvement.

The second part of the Institute training program and in some respects its most distinctive contribution is the Apprentice Plan. The plan is closely analogous to the interne and apprentice plans long and effectively employed in many of the older professions and in some of the new technical fields. It is an application in the field of administrative study of the maxim of learning by doing.

The student's laboratory work provides two distinct types of experience: (1) the three-hour daily assignment extending throughout the academic year; and (2) the full-time summer interneship of fifteen weeks.

Daily Field Work Assignments in Governmental Establishments

Each graduate scholar is assigned to a practical job in one of the local government agencies in the Philadelphia area—a job that not only trains him in realistic methods of governmental research and routine, but also contributes to the work of the unit served. In this way two of the major purposes of the Institute are served—training an efficient personnel and contributing direct services to local and state governments.

Individual capabilities and interests are, of course, thoroughly considered in the assigning of graduate jobs. The graduate's assignments have been designed to provide as broad an experience as possible. The specific jobs assigned to each graduate scholar have been varied considerably. Graduate academic train-

ing is in this way tempered and stabilized by the scholar's actual experience as a part-time public servant. The job assignment to the student of government is like laboratory work whereby he may test his theoretical knowledge in realistic situations.

Summer Internships in Governmental Establishments

The internships are assigned on the basis of the graduate's interest, the possibilities of future employment, and the student's natural abilities. In some cases the graduate interne continues after graduation as a regular government employee on the same job he was assigned as an interne.

Each interne is required to write a thesis based at least partially upon his fifteen weeks of employment. In every case the assignment of a thesis topic is made as practical and useful as possible to the agency served. In this way both interne and agency are benefited.

The Institute supplies a point of contact between the agencies of local government which are in need of trained employees and those qualified persons who are interested in entering governmental service. It can not guarantee that its courses will definitely prepare those who take them to assume administrative responsibilities. Yet it can offer to the student formal training in local and state government administration and actual contact with governmental affairs sufficiently valuable to increase his effectiveness as a public employee and to facilitate his personal advancement in the development of a career.

It has been indicated that some graduates obtain jobs in the offices in which they have served internships. Others receive merit examination appointments. One or two have been taken on the staff of the Institute each year as Technical Assistants. They work on the various studies and systems installations requested and usually paid for by the various Pennsylvania municipalities. These range from ordinance indexing to complete reorganization of accounting systems. Experience to date seems to validate the hypotheses upon which the Institute was organized.

The Government Service Program

Direct services performed for public agencies are an integral part of the Institute program. By performing these services at the request of governmental units and research agencies, the Institute not only provides for part of its pre-service laboratory training, but also fulfills an important obligation to the community and state. These services involve extensive use of the Research Service Center.

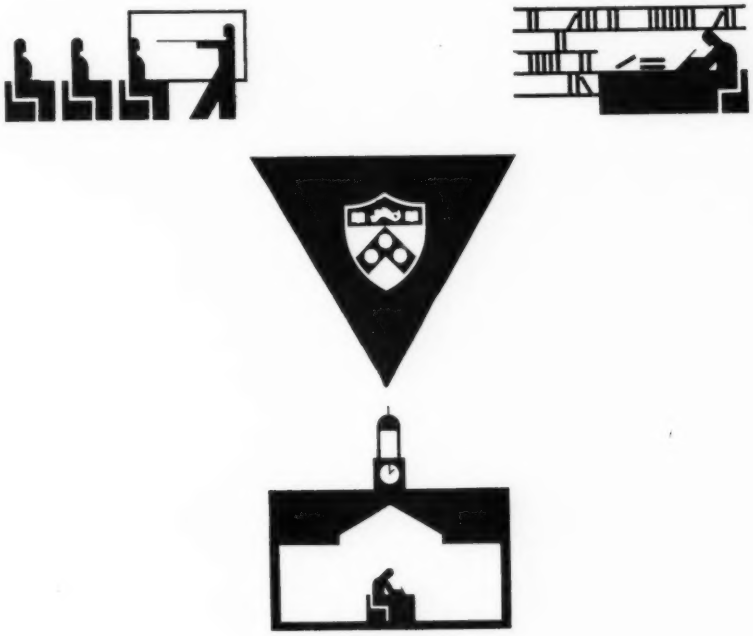
There are two main types of services: professional research conducted by staff members, and the more elementary work assigned to graduate scholars, student assistants, and undergraduate apprentices. However, there is considerable overlapping between the two: students are usually assigned to detailed and routine work, to assist staff members in their research projects. Such has been the case in direct services performed for the City Charter Commission and the Advisory Finance Commission of Philadelphia, as well as for other agencies. Another distinction might be drawn between types of direct services—those that are principally research projects and those that involve performance of specialized tasks, such as the indexing of borough ordinances.

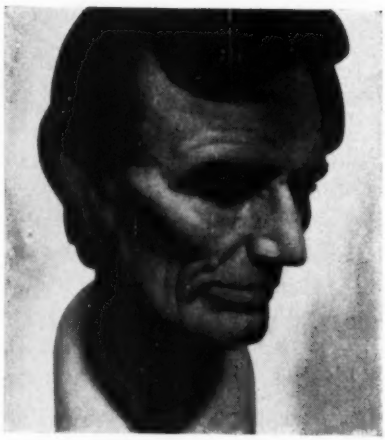
The nature of the direct services performed for public agencies is determined very largely by the requests received. A definitely planned and inflexible program of direct services would not be practical. The Institute's method generally has been to discover opportunities for important immediate services as well as for short-range research.

Cooperative plans with the Institute of Local Government at the Pennsylvania State College provide for the joint publication of a technical supplement to the monthly *Borough Bulletin*, official organ of the State Association of Boroughs. This supplement is designed to

appeal to the borough managers and engineers of Pennsylvania. The more technical studies of local and state government are published in pamphlet form. These are abstracted in the various publications read by government officials to whom the pamphlets are made available free. Working jointly on these projects, the Institute of Local and State Government of the University of Pennsylvania and the Institute of Local Government at Pennsylvania State College function as "The Pennsylvania Government Administration Service."

With effective cooperation among Pennsylvania municipalities, public organizations and educational agencies, progress in the improvement of local government in the Commonwealth is far more possible. First of all, with the scientific training of future public servants governmental administration is bound to be favorably affected. With the development of service centers for local and state units of government in Pennsylvania and with the dissemination of knowledge regarding the importance, the functions and the techniques of these units, public officials will manifest greater interest and effectiveness in their work. Theirs is a public responsibility, and the purpose of the Institute of Local and State Government is to aid them to fulfill that responsibility more effectively.





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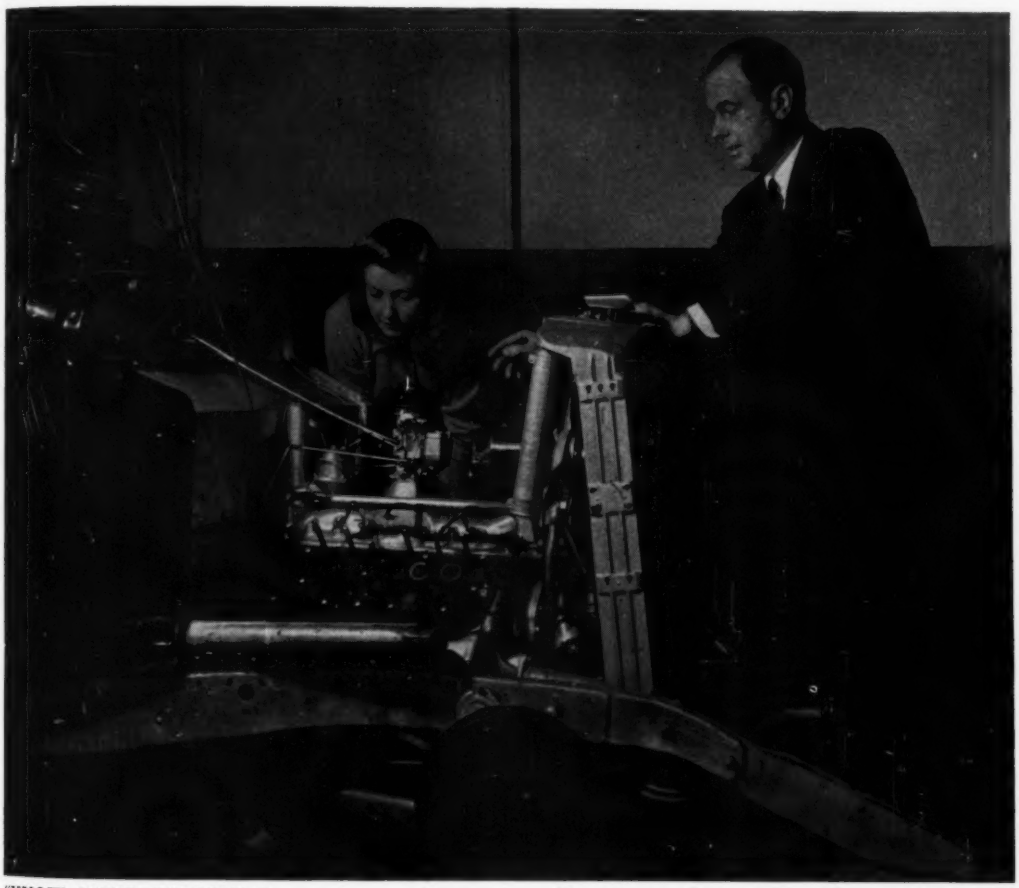
"NEW OPPORTUNITIES OPEN FOR COLLEGE WOMEN"

FREDERICKA BELKNAP

Director, Personnel Bureau, New Jersey College for Women

SINCE New Jersey College for Women is located in a state which has received a large share of war industrial orders, perhaps the extraordinary number of demands being made upon the college for women trained in science, mathematics, economics, and statistics is not surprising. The calls, however, are not confined to New Jersey, but also come from war industrial plants in New York, Massachusetts, Connecticut, Maryland, and Delaware.

In the interim between the first and second World Wars industries turned a cold shoulder to women with scientific training. Furthermore, a survey made of a number of war industries in New Jersey in January, 1942, showed many of them quite opposed to the idea of employing college women, but within a week or ten days after the survey was completed those same industries were eagerly asking the assistance of alumnae and were interviewing and offering positions to seniors for placement following graduation in June. During this interval, orders had been issued from Washington concerning the war production program, and the range of selective



"KNOW YOUR JALOPY" IS THE AIM OF STUDENTS OF NEW JERSEY COLLEGE FOR WOMEN WHO HAVE ENROLLED IN AUTO-MECHANICS, ONE OF MANY DEFENSE COURSES NOW PROVIDED BY THE COLLEGE

NEW JERSEY COLLEGE SENIORS ATTEMPT TO LEARN THE FUNDAMENTALS OF ENGINEERING DRAWING BEFORE GRADUATION

service exemptions had been greatly restricted.

One of the most pressing needs is for women physicists. Outside of teaching, opportunities for women physicists have been slight for years, so the field has attracted few. Now plants which produce airplanes and airplane parts are eagerly asking for women physicists. They are also in great demand in many of the fields dealing with problems of communications. Our senior physics majors—fortunately we had a few—were placed by the end of January. The positions will be held for them until June. These same plants are eagerly seeking mathematics majors to serve as assistants to their engineers with a vast variety of tasks assigned to them. Some employers have even expressed the idea that with some further training the women mathematicians may take over the work of the engineers themselves.

The demand for women trained in engineering drawing is enormous. Fortunately, we foresaw that this demand was coming and through the Engineering, Science, and Management Defense Training courses under the United States Office of Education, offered at Rutgers (of which N.J.C. is a part) we were able to offer a special non-credit course in engineering drawing to a selected group of seniors for the second semester. All students

who enrolled in this course had to agree to accept positions in war industries following graduation. Of the seventeen enrolled, a number have already been offered positions.

Plants which are making munitions or their many by-products, as well as the many chemical industries are searching for women chemists. The demand is far in excess of the supply. In addition to the demand for chemistry majors, the need in these plants is so great that they are seeking women with only one or two years of chemistry for more routine laboratory work.

A large arsenal is in need of college women to replace men in all of its office supervisory work. They are seeking mature, independent women with or without office experience, willing to work 48 hours a week and to rotate on the three shifts of a 24 hour a day work schedule and are placing them at good salaries. At the end of a three month training period, it is expected that these women can be appointed to supervise various sections of the office and thus release men for active war duty.

This same arsenal is seeking 50 women to serve as engineering assistants, again with training in mathematics and physics.

War industrial plants are also seeking women trained in accounting or statistics, but

Dr. John W. Bartlett, Professor of Dairy Husbandry at the Rutgers University College of Agriculture, Is Giving Seniors of the New Jersey College for Women Pointers on Feeding a Calf

particularly urgent pleas for women with such training or with general background of economics or mathematics have come from banks and insurance companies which are now faced with the need of replacing their men employees with women. Some of these companies state they have never before employed women in these positions. It is a bit amusing to observe their quite evident perturbation at the prospect. Another insurance company, perhaps a bit more courageous, is planning to appoint only women as claim adjusters. The company is frank in stating that they think women may be more successful than men in this field—in which event the women will be retained permanently.

Since I have been asked to stress new fields open to college women as a result of the war, only passing mention may be made of the enormous demand for college trained secretaries—especially for the scientific secretary. Furthermore, the many demands under the Federal Civil Service will not be discussed. The extraordinary needs and development of opportunities under the Government should not be overlooked, however, by those interested in studying fields open to college women today.

Not since the first World War have college women had a chance to break into industry and never before have they had such extensive opportunities. If industry will have faith in them, they will justify this confidence. In this event, the doors now open to them should not be slammed shut on them when the present emergency is over, as was done after the first World War. Whether the women themselves will enjoy the work sufficiently to want to hold the doors open is another question which only the future can answer.

It should be noted that rapidly changing conditions may make the contents of this article out of date by the publication date.

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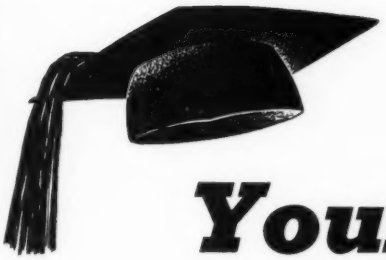

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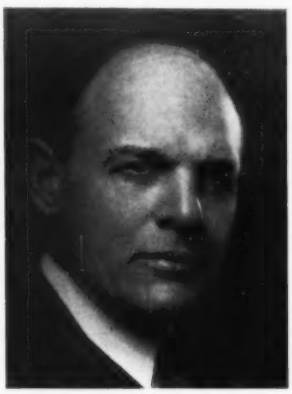
WOMEN'S LAND ARMY

DR. T. B. SYMONS

Dean and Director of Extension, University of Maryland

IN RESPONSE to the request of Mrs. Laura N. Dupuy, representing the American Women's Voluntary Service, the Extension Service of the University of Maryland, in co-operation with subject matter departments, is conducting a series of practical short courses to assist women who wish to offer their services as farm workers.



DR. T. B. SYMONS

The courses are designed to give practical instruction and experience in the fields of horticulture and gardening, poultry raising, and dairying. They were made possible through the active interest of the heads of the respective departments, Dr. C. H. Mahoney, head of the department of horticulture; Dr. M. A. Jull, head of the poultry department, and Dr. K. L. Turk, head of the dairy department.

The women were registered through the American Women's Voluntary Service in Washington and among the thirty-eight who registered for the first courses were residents of Washington and surrounding areas, both Maryland and Virginia.

Purpose

The purpose of the courses is to orient these patriotic women, and also to give them practical experience in various phases of the respective industries. It was, of course, impossible at the season the courses were started to go to the field, but the heads of departments and associates devised laboratory demonstrations and gave instruction and practice in operations necessary in actual farm work. Much practical experience in handling chicks was given in the poultry plant. The work in poultry included brooding chicks, feeding and rearing practices, feeding and management of layers, laying house construction and management, culling laying flocks, grading and marketing poultry products, prevention of losses by disease, and other similar problems. In the field of horticulture and gardening, many phases of vegetable and fruit production, picking and packing were given the women in laboratory exercises, including fruit picking, pruning and grading of fruit. Full experience in the cannery at the institution is given, so that the women can actually engage in work in a factory.

The women enrolled in these courses are very much in earnest and very appreciative of the opportunity to gain knowledge and experience that will fit them to offer their services next summer in case there is an emergency in harvesting crops and for other farm work to which they may be adapted. Many of the women have farms of their own where they wish to give special attention to producing more of the products for which there is greatest need. Others desire to gain experience that will prepare them to respond to requests for help on farms.

It is assumed that the effort to train women for farm labor is only to supplement the efforts in all other directions to mobilize forces to meet the farm labor shortage. It will be a forerunner, we hope, of many others in forming a so-called Women's Land Army of volunteer workers that will greatly aid the farm labor situation.

Undoubtedly, farmers and most of us are a little skeptical as to the ability of women to serve in the farm labor field. We, of course, can cite many instances where women in country districts and on farms are rendering

Dr. A. Lee Schrader, Professor of Horticulture at the University of Maryland, Explains the Points to Consider in Grading Apples

most valuable service and are eminently successful in various types of agriculture. There is the case of Mrs. Rowena Tull, whom we honored two weeks ago at the University of Maryland as a winner in the Ten-Ton Tomato Contest. She raised last year more than 20 tons of tomatoes on the acre on a six-acre field. This is the largest yield that any producer has succeeded in making in Maryland since the contest was started more than fourteen years ago. When asked before a group of men how she produced such a tremendous yield, she gave a very practical explanation of selecting the field, fertilizer and manure applications, and stated that she planted all the tomatoes herself and supervised the work of cultivation, harvesting and marketing. Many similar cases could be cited where women are conducting farms very successfully, and, of course, we all know of their adaptation to producing poultry and operating dairy and livestock farms.

In speaking to the volunteers at the first session of the short course, I urged them to select the kind of work they like, as everyone is happier and more efficient when engaged in the type of agriculture in which he is most interested, such as poultry, dairy, or gardening. Farming offers a wide variety of work.

Need for Farm Labor in War Emergency

We are considering plans whereby the volunteers for the Land Army may get further

DR. M. A. JULL, HEAD OF THE POULTRY DEPARTMENT AT THE UNIVERSITY OF MARYLAND, GIVING THE WOMEN INSTRUCTION IN DETERMINING THE QUALITY OF EGGS BY "CANDLING"

experience in practical operations as the season progresses. I firmly believe there will be need for every pair of hands that can help the farmers in the war effort for all-out production. They are asked to produce more of the vitally needed products then they have ever produced in one year. It is known that the supplies of farm equipment and machinery will be limited. In the concentrated industrial areas of the East, demands of war industries are taking labor from every community, as well as the selective service for military duty. Farmers are confronted with the difficult problem of greatly increased production with reduced labor supply. Therefore, all effort on the part of city people, who for patriotic and other reasons are equipped to help the situation, cannot fail to aid in the different fields they may select.

Present indications give an idea of what

the farm situation may be in the future. For instance, in November, 1941, there were about two million men in our military service; in 1943, it is expected we will have five million, and in 1944, probably ten million. In the industrial field, we now have about five million. It is expected that in 1943 we will have eighteen million, and by 1944, twenty-one million. If these figures have any significance, it behooves us to begin planning now to meet the more serious situation that will develop as the war picture expands.

Another fruitful source of labor will be boys and girls of high school age in the cities, certainly around fifteen or sixteen and up, and college students who may well consider fitting themselves for service in this field. We believe that there is a substantial number of women and others, who may by instruction and experience learn to aid in the emergency. Certainly, they can be guaranteed a good atmosphere and plenty of sun, as well as hard work, but there are many phases of farm work and farm life that are pleasant and enjoyable. It stimulates the mind and body; there are many satisfactions to be derived from a good garden, from picking fruit, or handling livestock. I have no doubt that many of the women who may patriotically offer their services to the Women's Land Army will receive satisfactions and inspirations they would not otherwise experience.

The greatest need in Maryland will be for help in canning the large acreage of crops the Government has asked the farmers of this State to produce. This will be principally in raising and canning tomatoes. The greatest emergency will be in securing pickers and peelers for this fruit in the factories. While no one can foresee the extent to which this movement may develop, we believe it offers a splendid opportunity for latent forces to aid in an emergency. Women are doing a valiant service in agriculture in England, and we know that they will do the same in America if the necessity arises.

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HOW COLLEGES CAN ASSIST INDUSTRY IN TRAINING EXECUTIVES*

A. R. KELSO

Assistant General Manager, U. S. Cartridge Company

A GREAT deal has been said recently about shortages of materials, machines and men, and we in industry are vitally concerned with a major problem, namely a shortage of capable executives. Everyone is concerned about this lack of trained men, and Industry is now engaged in employee training intensified to a degree never dreamed of before. This training, however, has dealt mainly with mechanical skills, and only some few companies have broadened their training programs to include foremen or first line supervisors. Nevertheless, the major problem as to where the executives are to come from, still remains. *Their* decisions and actions will guide and control the employees now being hired and trained. This problem is not merely temporary, for while we need capable executives today—many of them in the new industries and plants springing up overnight—the need for soundly trained executives will be accelerated in the years to come when we shall have to make the difficult adjustments required in a post-war period. Then indeed will our executive selection and training programs be tested.

A. R. KELSO

Industry, for many years now, has been relying on the colleges and universities of this country, as one of the chief sources of supply of the men it hires and trains as potential executives, since it is expected that these college men will eventually move into major executives positions. However, this program has not been entirely satisfactory, for many of the men drawn from colleges and universities into Industry do not develop as rapidly as they should. Industry does not expect fully trained men from the colleges; it expects them to serve an industrial apprenticeship before they take over executive responsibilities. However, since speed is the essence of executive training programs today, it is essential that these young men, when they leave college, be thoroughly prepared to enter industry, thereby shortening their training period there. Moreover, it expects that they will have had inculcated in them the spirit of cooperation, for there is no place for the individualist on an executive staff in modern industry. Effective coordination, within the business organization, demands a high degree of cooperation from the individual. It demands a team spirit and a willingness to submerge the individual interest, at least temporarily, in order to achieve the greater objective.

It is the men who will become our future executives in the engineering and production fields that we wish to consider at this time. When they graduate from college, it is still necessary for them to serve an internship or a training period of apprenticeship with Industry. Therefore, there is a joint job to be done: the colleges must prepare the men for industry so that the training given them, as they serve their apprenticeship, can be most effective.

The Transition from College to Industry

The change-over from college life to Industry is frequently a difficult period for the young man, and the colleges can do much to

* This article is based upon a talk presented before the Society for the Advancement of Management in New York City on December 4, 1941.

solve this problem. It has been found that the adoption of the co-op plan in the engineering schools of certain institutions makes the transition from school to Industry easier, because the students are being prepared over a period of several years to make this change. Early in their training these students learned to deal with *real*, not *ideal* situations, and have thus made the transition from *theory* to *practice* gradually. Therefore, on entering Industry they are adequately prepared to develop rapidly from executive material to executives. Unfortunately, however, the schools using this educational plan are in the small minority, and thus far too many college graduates are still theorists. impractical idealists, unable to see how they can put their education to work to their own and their employer's mutual profit and benefit.

Based upon research and experiment, the automobile industry has learned to make its annual model change-over with a minimum loss of time and manpower, and the colleges can profit by this experience. They must recognize their responsibility to the students and to Industry by finding the solution to the problem of making possible a more rapid change-over from the textbook period to the working period. The college student must be prepared to make the transition from dealing with abstract and ideal principles to working under the very real conditions existing in industry.

We hear a great deal about the scientific approach, but I wonder whether the colleges have ever tried to apply it to the question, "What can colleges do to assist Industry in training executives?" The answer involves a definite program of research. First, it is necessary to discover what Industry needs in its executive material. This can be done by studying the men in Industry who left college five or ten years ago, both the successes and the failures, and considering why they failed or succeeded and whether they have met the needs of Industry. Second, the curriculum should be analyzed in the light of the facts discovered about Industry's needs. If changes are needed, the college should have the courage to make them. We cannot afford to be passive either in industry or in our schools; corrective action must be taken where needed. I have known of instances where committees of experienced men have been appointed to study these problems and recommend changes, but their reports have been written, read, filed and no action taken. Such a maneuver has no place in modern Industry, and especially in private enterprises. Third, inventory should be taken of faculty personnel, and the colleges should consider whether, in the light of Industry's requirements and the courses given to meet them, the staff is adequate in numbers and experience. Thus, to recapitulate, the scientific approach of getting the facts, analyzing them, making decisions based on the analyses, planning to put those decisions into effect, and then taking action to put the plan to work should be adopted by the colleges.

Essential Qualifications of Prospective Executives

There are certain essential qualifications which Industry is looking for in its prospective executives. All young men entering industry, who expect to rise to executive positions, should be well-grounded in the fundamentals and basic principles of industrial organization and management, industrial relations and accounting. Conditions change over a period of time, and the theories taught should be in tune with the times. For example, the industrial relations principles being taught in the colleges should be based on present day labor conditions. However, a knowledge and understanding of sound principles is not enough. Industry needs men who understand the practical application of these principles and whose

training has combined modern theory with 1942 practice.

Often our problems arise from the necessity for re-training men who have had courses in management, but who fail to understand lines of authority that exist in Industry for good and sufficient reasons. They fail to see the relationship between departments and the relative value of each sub-unit to the whole structure. Our difficulties also are with the men who have had accounting courses and have the theory of cost accounting at their fingertips, and yet who see cost accounting *only* as an isolated department, not as a *tool* used in everyday work. Rarely does it occur to them that the costs in their department, and their advancement and pay increases go hand-in-hand. The college-trained man should be cost-conscious, not merely trained in accounting, for although we are still operating under the profit system, the average college-trained man is utterly unconscious of the relationship between costs and profits.

The young man fresh from college should be able to *sell himself*. So few of our college graduates today know how to ask for a job, either in person or by letter. It is astounding to note that so many college trained men do not know how to organize and present their ideas on paper. Many of the personal interviews I have had with college graduates are equally unsatisfactory, for too often college men are also unable to set forth their qualifications in conversation. To offset this, some colleges today are introducing courses in effective letter-writing. The evening schools early recognized the need for such courses, and may I say at this point that it would be well for the colleges to offer as part of their regular program, those courses which are most in demand in the evening schools, for the latter are a good criterion of what many young men in Industry find they failed to get in college or elsewhere. The ability to talk and write forcefully and to present well organized ideas is essential to every executive, and many a young executive trainee fails because he has never learned to write a clear, concise report or to talk extemporaneously. Therefore, the colleges should train their young men to think as they talk and to organize rapidly a clear, concise answer to any problem which may arise.

To qualify as executive material, the college graduate must have a sound and well-rounded training. Our engineering schools turn out engineers soundly trained in engineering, but they are almost totally lacking in knowledge of how to handle men or analyze a balance sheet. Only a few of the engineering graduates go into research work, for the majority find positions requiring not only the use of their technical training, but also the ability to manage men and costs. Yet this phase of their training is almost entirely neglected, and the problem is left with Industry. The junior executive needs training in handling people, whether he is in the shop, the accounting department or the sales department, but only the college men specializing in personnel and management seem to come to us with any knowledge of the fundamentals of selecting, training and guiding others. We find that the man who has worked his way through college progresses more rapidly, for he has learned the value of the dollar, is familiar with salary and wage ranges and knows about what remuneration he should receive while in training.

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Importance of Determining a Goal

To me one of the most important factors that the college man should learn in the course of his education is to determine his goal and to plan his path accordingly. A number of years ago, I wrote a paper entitled "Blind Alley or Thoroughfare" which alluded to the route a young man travelled in attaining his goal. So many of our young men leave college, get a job and let Nature take its course, but by following this plan a number of them wind up in a blind alley. They do not know what they want, where they want to go or how to get there.

I personally believe that a young man in his early years out of college should get a variety of experience to prepare himself for an executive position. If a man's early experience includes a number of different positions, his training is broadened by the varied contacts. Yet so many young college men today leave school without a goal or plan, seeking a job with one Company and expecting to stay there for the duration of their careers. Experience makes executives. Sometimes experience comes with a single company, but more often the man with a goal and a plan realizes that he must occasionally change positions to hasten his progress toward his objective.

When the colleges undertake to determine what Industry expects in the young men it seeks as potential executive material, the researchers will find that in addition to the above-enumerated qualifications, a number of others will be required, including the ability to accept and work under discipline, to take orders and follow them, to be good team members who are able and willing to cooperate. It should be remembered that there is no place in a group of potential young executives for the egoist or the "lone wolf."

Necessity for Analysis of College Courses

The next step to be taken by the colleges is an analysis of the courses given to the prospective young executives. Do these courses have a practical slant or are they very nearly pure theory? If the students are not given actual training in Industry, such as that supplied by the co-op schools, they should have frequent opportunities to visit industrial plants, and these visits should be in the form of small, observing, question-asking groups, not large, sightseeing safaris. Furthermore, the courses should include speakers from Industry who are experts in their field. Advantage should be taken of every opportunity to tie the practical side into the textbook theory.

Industrial experience in the form of case problems should also be an integral part of every course offered, for this is one way to make the transition from college to Industry easier for the college men. The use of the case method meets the objection so often advanced by Industry that the college man is impractical, for it ties the principles learned from textbooks into the practical application of these principles in Industry. The case approach is the way to train our future executives to deal with the real problems which exist in Industry, but the cases *must* deal with 1942 problems. Therefore, they must be kept up to date and solved on the basis of current conditions. Industry is eager to hire the graduates of institutions which are using the case method, and the success of institutions where either the co-op plan or the case method is used should indicate to all the value of this type of training.

As part of the colleges' research job, the textbooks should also be examined. I know of one institution that was using a book eleven years old for its text in Personnel Management; yet the personnel problems in Industry have changed tremendously in the past eleven years. In the light of legislation of the past few years and of the changed and changing status of labor, our whole philosophy of Personnel Management has been completely

Students in the Five-Year Co-operative Retail Management Course of Drexel Institute of Technology Have Five Terms of Actual Store Employment in Addition to the Intensive Practical College Training in Fundamental Principles of Merchandising

revolutionized, and if history in the labor movement repeats itself, there seems to be little hope of being able to stabilize our whole philosophic approach toward the entire personnel problem. To add to the complexity of the situation there is the multitude of problems arising out of the effort to gear Industry to meet the demands of the War Emergency. Taking all of these changes into account, we find that many of the textbooks now in use show that the authors are out of touch with present day industrial practice and problems. In fact, the whole matter of Industrial Management and Industrial Relations has been in such a state of flux that it has been virtually impossible to bring out a textbook that would not be obsolete by the time it was printed. Accordingly, the textbooks used should not only present well established principles, but should describe how these principles are put into practice under actual industrial conditions. All of this material is available from Industry, if the Colleges would only ask for it.

Along with the study of the text material in use, the whole curriculum should be examined. It is possible that certain courses should be eliminated and others added. Perhaps some should be condensed and streamlined, so that the young man is given only basic

principles and instructed where he can find additional material on his own, if he is interested in continuing study in that particular field. It is the job of the colleges to select those courses which are pertinent to preparing the student to meet the standards set up by Industry. Some institutions devote the entire four years of college life to courses in the industrial field; others use only the last two years of college life for teaching industrial courses. Only research can determine which is the better practice in terms of Industry's requirements. I do not mean by this that Industry is seeking young men who have been trained *only* in the field of Commerce, for the potential executive needs the basic principles of economics, English, psychology and other courses as well. His education should be well-rounded, but the extent to which non-technical courses should be included in the training program depends upon the facts uncovered in the research study of what Industry expects of the young man hired for executive training.

Examination of Teaching Methods and Faculty Personnel

After ascertaining the facts as to what qualifications and training Industry requires in its potential young executives and examining the materials available to meet these demands, then the teaching methods should be considered. Teaching methods, like mechanisms, should be examined at regular intervals to see if they need to be overhauled. Industry is adopting the conference method of training executives, and it would be interesting to determine the extent to which the colleges are using this technique.

In the beginning I set forth certain steps for the colleges to follow in their research in connection with the problem of helping industry to train executives. The last of these was "taking inventory of faculty personnel." In industry we take periodic personnel inventory, for jobs change over a period of time and the individual who was once the right man for the job may eventually become the wrong one. It is very important also that the teaching staff be adequate in numbers and in experience. Classes should not be too large, and instructors should not be obliged to teach too many classes, otherwise they are prevented from making frequent and regular contacts with the problems of Industry, and thereby giving the students an up-to-date viewpoint. All too often the colleges use immature instructors, whose sole knowledge of the business subjects they are teaching is merely what they have read. A university would not permit a man to teach medicine if he were not himself a doctor, and this principle should not be violated in the men who teach Industrial Management, Industrial Relations or other business subjects. A faculty should not include instructors who have never worked in the field they teach, for they cannot possibly adequately train students to step into desirable jobs in Industry. To my way of thinking, every man teaching in the business field should have worked in Industry, at the kind of work he is teaching. Further than that, professors and assistant professors should frequently return to Industry to keep in touch with the changes that go on. A man who has been teaching students Industrial Relations for ten years and has had no experience in Industry during that time cannot possibly meet the demand. In my opinion a man is not equipped to teach in the industrial field unless he has not only worked at it but has also worked at it *recently*.

The colleges must also get the best possible men available as teachers. They will undoubtedly meet competition, for Industry is crying for experienced men in the same fields where they are needed as teachers. It is vitally important that the colleges meet this competition financially, so as to get the best-qualified

teachers possible, because upon this factor will depend, to a large degree, the qualifications of the men being trained as future executives.

There came to my attention recently a letter from a college executive seeking help in locating a man to teach in an industrial engineering department, experienced in motion study and plant layout, with enough experience to know how motion study and layout work are carried on beyond the textbook stage. The specifications were prime, but the salary offred was not of a level to attract a competent man of Industry. A chance for advancement was offered, but in our own Employment Office we would pay substantially more than the amount offered by this institution and *also* offer a chance for advancement. This is not to be construed as primarily an appeal for an increase in salaries for college instructors, but any realistic approach to the problem will reveal that teachers' incomes must be comparable to those offered by Industry, if the best men are to be obtained for the faculties.

There is a great job to be done by the colleges, and it needs to be done immediately. It must be determined, first of all, what Industry wants in its young men who are to be trained as executives; then the programs must be adjusted accordingly; the materials and the teaching methods in use must be revised; and the question of the teaching personnel must be studied carefully. Industry will give every possible aid in furnishing the facts, but it is up to the colleges to develop the conclusions and to plan to put them into practice.

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THE COUNSELOR AND CURRICULUM CONSTRUCTION

HOWARD D. WOOD
Principal, Hope High School, Providence, R. I.

ONE of the most important contributions which a guidance counselor in junior or senior high school can make toward an effective school is in the field of curriculum research and construction. As a result of his frequent contacts with his pupils in group guidance classes and in individual conferences he learns much about the interesting and uninteresting subjects and teachers in the school; from interviews with parents he gains vital facts about his fellow teachers and the attitude of the community toward the school. As a result of his study of test returns he can evaluate the effectiveness of instruction in his school in comparison with the attainment of previous years as well as with the achievement of other schools. From a study of teachers' marks he can estimate how well the teachers think the pupils are applying themselves to the educational diet offered to them. From an analysis of the returns of follow-up studies of pupils he can ascertain how well the program of his school fits into later plans of pupils in high school, college, business or industry. He also can put his finger on the pulse of the community in a realistic evaluation of the work of the school in preparing boys and girls for everyday living, not simply for academic sufficiency. Wise is the administrator who is willing to make use of this gold mine of real information, which will prove of value in determining what specific facts and materials shall be presented to and required of pupils of varying interests, aptitudes and capacities. It goes without saying that the counselor must be an individual who has the ability to work with other persons and arouse their cooperation without at any time giving the appearance of directing, guiding or administering.

HOWARD D. WOOD

Education as a Coordinated and Integrated Activity

The cooperative program to be presented in this article as an illustration of how counselors may aid in curriculum construction came about as a result of a curriculum revision in social studies in the Providence junior high schools resulting in an inevitable increase in emphasis upon departmental organization and specialization in subject matter. It must be admitted without argument that specialization raises the general level of academic efficiency of a teaching staff by allowing teachers to become proficient in specific areas in which they have a particular interest. However, a serious danger arises in the fragmentary, disconnected, unintegrated approach to the whole program of educating individual boys and girls. Expert teachers are prone to place emphasis upon the facts of their own subjects, which are all too often organized without regard for relationships with other subjects, rather than upon individual pupils as well-rounded personalities. Instead of the former close contact of the elementary school between a mother-teacher and a group of individual pupils there may be as many as 10 or 12 different teachers with whom pupils take work during a single week. Under such an arrangement subject matter often becomes the predominant interest of the teacher. The success of the teacher is too often measured solely by class norms and averages, thus accentuating this tendency.

In the attempt to make the education of every pupil a coordinated activity, the faculty

of the school, recognizing that everything which a child does involves learning, decided that their chief function was to guide and shape the activities of each and every pupil so that learning which would prove desirable to the child, his parents and the school might ensue and extend over the eight or more waking hours that the pupil might not be in school. It was agreed that subject matter was important, as a means to an end, but that compartment education must be replaced by a coordinated program developed around a central theme. The teachers chose social studies as the core or hub of the wheel because the fundamental purpose of the social studies program was to study how people live together. The other subjects in the curriculum were compared to the spokes of the wheel, the tie-up between the various subjects to the rim of the wheel and the counselor as the hoop tying the whole program together.

Organization of Grade Committees

To develop this cooperation, the teachers of the building were organized into six grade committees. Teachers who worked with 7B pupils served on the 7B committee; those who taught 8A served on the 8A committee, and so on. Of course many teachers served on two or three committees. The counselor of a particular grade served as chairman of that grade group which met at least one week in advance of the start of a new unit of work in social studies, to discuss the opportunities for correlation in their particular departments. The counselor's function as chairman was to keep the discussion moving along, to provide information regarding strengths and weaknesses of various groups of pupils and of individual pupils and to point out significant advances that were being made. Every week the counselors met with the principal for the purpose of coordinating all their activities and discussing the development of the curriculum. To prepare adequately for the meeting, all teachers had copies of the revised course in social studies with integrating materials and a time table showing the time to be allotted to each unit, which were carefully studied before the meeting.

At the grade meeting the counselor briefly reviewed the progress up to date, and then the social studies teacher started the ball rolling by outlining the next unit of work to be covered and tying the unit in with previous units. He discussed the related activities that might be carried on in his class and also presented his suggestions for animating the subject matter for the purpose of arousing pupil interest. When the social studies teacher completed stating his plans, other teachers, as the spirit moved them, would present ideas how they might further enrich the educational offerings of the school for that particular unit in their own classes. Many times teachers presented ideas for use in departments other than their own. Each teacher had to keep in mind the fact that his own work must be completed according to schedule, even while trying to assist in tying together all the pupil experiences.

Coordination of Curriculum and School Activities

In the give and take of open discussion, there developed many unexpected ways of coordination among various subjects in the curriculum, such as art and science, mathematics and woodworking, music and typewriting. Integration with the foreign languages and algebra was not developed to any great extent as these were considered specialized subjects. However, greater appreciation was growing in the minds of all teachers for the value of subjects presented by others. Knowledge of the current social studies unit on the part of each teacher enabled him to select ready-at-hand and understandable illustrations for his own teaching. Records were kept of committee meetings, so that they could be

passed along to other later groups of teachers dealing with the same work as helpful starting points for further development of the plan.

At all times the counselor remained as chairman, making sure that everyone had a chance to participate in the discussion, and offering pertinent information concerning abilities, interests and weaknesses of individual pupils and groups of pupils. The counselor also called attention to novel developments of the program.

To illustrate the working of the plan let's examine 8B Unit II, "The Settlement of America by the Europeans."

Biographies of colonial personages and writings on the life and customs of the time were read in English classes. Pupils wrote compositions on the period or on the material they had read, or they experimented in writing imaginary autobiographies of historical characters. Such composition work was far superior to fictional themes on "What I Did During Vacation" or "What I Received for My Birthday." The material presented supplemented the work that was being done in the social studies classes and was not a duplication of effort. The pupils saw the value of their additional reading, which gave them new light on the unit, while increasing their skill in reading under the direction of teachers who were trained to give specialized assistance.

Penmanship teachers checked English themes for the quality of writing in order to insure a carry-over of instruction into everyday use in all classes.

Spelling classes developed lists of words which the pupils needed in social studies and which were in everyday use in various classes and in current events. These word lists, compiled from lists sent to spelling teachers by instructors in the various departments of the school, were without question more vital and met the needs of the pupils to a much greater extent than the arbitrary lists which had hitherto been required for the three grades of junior high school. They served as an excellent supplement to the Thorndike list.

In science the children contrasted modern systems of heating and modern cooking utensils with the fireplace and the cooking utensils that accompanied it. Present systems of lighting were compared with candles and our modern glass windows with the parchment of the earlier period. Differences and changes in transportation, communication, and the development of natural resources were also studied.

In art, pupils studied Indian symbols and design, from the standpoint of appreciation as well as creation. In this work the emphasis was placed upon nature as a source of ideas for design. The pupils became interested in industrial products made in early America—wrought iron objects, Dutch pottery, pewter ware, American quilts, homespuns, samplers and simple jewelry. In many cases there developed from this preliminary study a desire to create articles to illustrate this period.

All pupils in 8B were required to take music, and they sang and discussed "Old Hundred" and "Thanksgiving" from the standpoint of historical importance. Many other songs of the colonial period, including songs of Indian life, were utilized to provide interest and enrichment. Strange to say, pupils began to like music as a requirement.

In the shops the boys built articles of the period, studied the development of tools and processes, and made bulletin board displays and exhibits which appeared all over the building.

In home economics classes the girls studied the development of clothing, changes in style, production and consumption of foods, and contrasted the early days with the present. The construction of period costumes for use in auditorium programs served as a powerful stimulus to better work.

In mathematics classes pupils contrasted modern methods of exchange and the early system of barter. They worked problems in land measurement, weights and measures. Graphs and charts, which may be worked into any class, became much more interesting and alive when connected with a subject already under discussion in another class.

Physical education offered an opportunity to utilize the old time dance, to discuss posture and health conditions, to stimulate interest in such topics as food, sanitation and cleanliness. Even the boys began to show more interest in acquiring grace and charm.

In the foreign languages, particularly French, the realism and the contributions of the people and culture, as well as their effect on the English language, were discussed.

In the auditorium there were many opportunities to use poems, songs, pictures and biographies relative to the period. Shadowgraphs, still pictures and pantomimes furnished interest and motivation. In dramatics the pupils acted and even wrote little plays. One such project was carried out by an art teacher, who developed and presented at a noontime assembly a play in which the tie-up between art and all the various subjects in the school, not simply social studies, was made clear. Visual aids such as the Yale Chronicles greatly enriched the content of the curriculum.

In guidance classes the counselor kept alive an interest in the cooperative program by discussing with pupils interesting and novel developments in any and all areas of the school.

Connections between social studies and other subjects were never forced. The aim was simply to integrate where integration was natural. The teachers tried to keep a live, healthy activity program going steadily throughout the school in order to stimulate pupil cooperation and participation.

Each teacher's knowledge of the current social studies unit enabled him to select readily available, interesting and understandable illustrations for his own teaching.

Advantages of Plan

The plan of coordinating the various activities of the school staff worked for a better spirit among teachers and pupils, who found, much to their surprise, that there was a connection between all their studies and that all teachers were interested not simply in the mastery of highly specialized factual subject matter, but in the development of individual boys and girls. As one pupil aptly expressed it, "The teachers know us, like us, and we like to have them teach us."

After the first shock of the experiment wore away, the teachers began to manifest a noticeable increase in appreciation of the importance of the work of their associates, and to demonstrate their recognition of the boys and girls in their classes as well-rounded personalities. The need of recreation on the part of students became recognized by the giving of more supervision of study during the class period. Recitation of facts learned in home work study rapidly gave way to learning in school with a consequent lessening in the amount of home work required. Strange as it may seem, the teachers did not begrudge the time given to meetings, many times staying in conference two or three hours.

As the influence of the counselors in curriculum study grew, they were invited more and more frequently into classrooms by teachers to observe the progress of groups, and teachers went to the counselors for conferences about pupils and the presentation of subject matter. At no time did the counselor become a supervisor of the teachers. He always remained, and here was a vital point, nothing more than a possible source of help available to the teachers for the solution of trying problems within the classroom. Teachers came more and more to recognize the

value of this friendly service, which was always at hand.

Teachers in one subject began visiting classes in other subjects, finding out the methods and materials as well as the problems and aims of other departments. Teachers from other junior high schools became interested in the working of the plan, and the consensus of opinion of the teaching staff was that it had worked to the betterment of school spirit and to a livening of the curriculum. At the end of three years each member of the staff had acquired a comprehensive picture of the work of the junior high school, while the pupils had acquired a greatly enriched experience and a much more unified educational program, which should result in a better balanced individual.

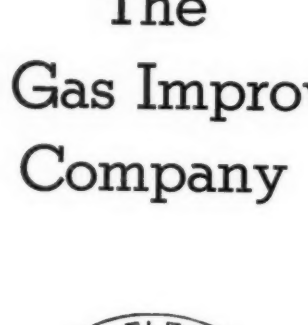
The purpose of this entire experiment in integration of the curriculum was to improve and coordinate the educational offerings of the school to the end that the needs, interests and capacities of each pupil might be better served, thus profiting society as a whole. There was a definite attempt in this experiment to cut the educational cloth to fit the individual, rather than to force every child into a standardized garment, hence the important place of the counselor.

The chief desire was to educate boys and girls so that they might become well-rounded individuals with sound educational foundations and clear cut personalities, ready to take their places in society and fitted to cope with problems that might arise because they had shared in their own educational advancement, had developed the ability to meet with their fellows, and had a broader, more liberal outlook on life. Add to this appreciation of and respect for the rights, qualifications and personalities of other persons with whom the students came into contact, and it must be granted that this is real educational guidance.

The success of such a program depends upon the wisdom, patience and cooperation of every teacher whose function it is to coordinate activities and offerings, to bring order out of possible confusion, to unify the objectives of his subject, and to prepare an adequate approach to the subject for the children who come under his direction. Particular credit, however, must be given to the counselor who is the friendly source of help and inspiration to teachers and pupils and who is responsible for developing the ideal that all teachers must take the children where they are without criticism of their predecessors, and after determining individual and group strengths as well as weaknesses, to adapt his instruction to the needs, interests and capacities of the individual members of the group, planning carefully to carry the group as far ahead as he can with sound instruction, insisting on mastery as far as possible, after which he must honestly test and evaluate the results. As a final step he must provide help for cases needing remedial work, and lend to the whole program the inspiration and guidance of a real teacher who keeps uppermost in his mind the fact that these boys and girls come to school with open minds and hearts, waiting for the teachers to offer the riches which they have accumulated by years of patient study. Only when this has been done, can the teachers claim that the schools have succeeded in fulfilling their function.

1882 1942

The United Gas Improvement Company



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EFFECT OF ACCELERATED PROGRAM ON STUDENT EMPLOYMENT

UNIVERSITY OF TEXAS

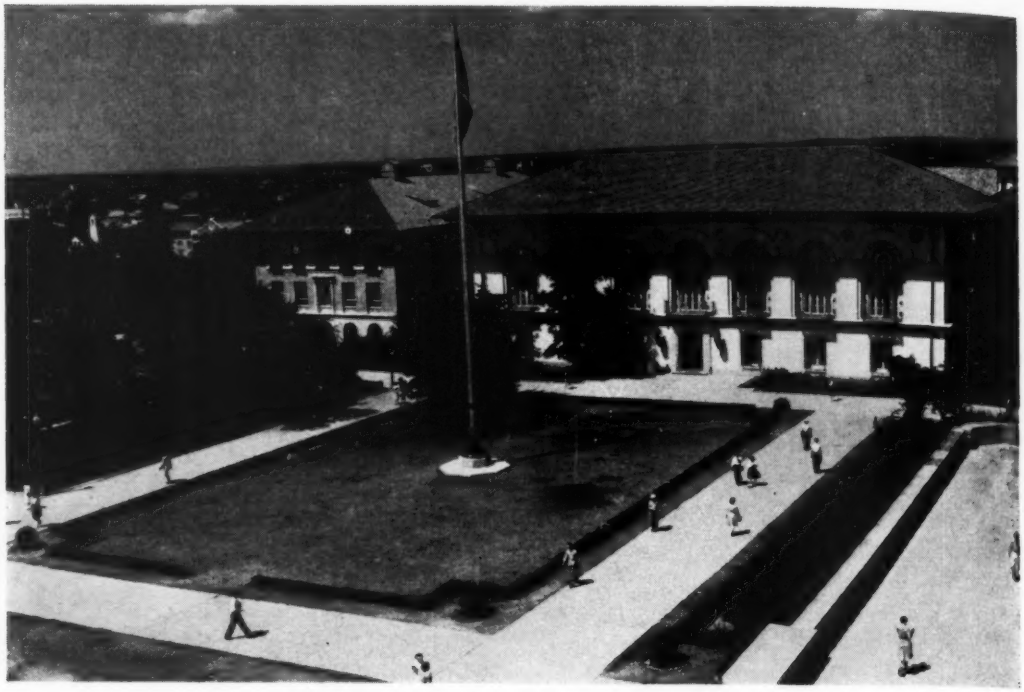
BY THE addition of an Intersession between the Summer Session and the Long Session, the University of Texas has gone on a twelve-months operating basis in order that students may accelerate their educational programs. This new schedule permits the completion of the baccalaureate in thirty-two months in several divisions of the University. Although the requirements for graduation have not been lowered, many students will take advantage of this opportunity to reduce the length of time required for graduation.

Robert F. Moore, Secretary of Appointments, Columbia University, had a timely and interesting article in the December, 1941, issue of SCHOOL AND COLLEGE PLACEMENT, p. 9, emphasizing the value of effective occupational orientation through the further development of the summer trainee program. He pointed out that juniors, being career conscious, are most ripe for this experience and that employers recognized this fact and were favorable to using such students for full-time summer jobs, enabling them to get a variety of experience and incidentally earning money for the school expenses for the following college year.

The accelerated program will eliminate many of these opportunities for summer earnings; for if students attend classes during the summer, having only a week's vacation, they will be obliged to seek part-time jobs during the winter and summer in order to help pay their school expenses. Draft boards that have deferred certain students until graduation will insist that such students go to summer school, and will discourage the use of vacations even if used for vocational training. The expanded program will be used particularly by students in the Medical School, the Engineering School, and the College of Arts and Sciences as it is desirable for them to accelerate their schedule. Economic insecurity for some parents caught in the fog of priorities' unemployment and dislocations in other fields, and parents on fixed salaries facing rising living costs and increased taxes may also add to increased demands for part-time jobs. College employment directors will need to make plans so as to meet this increased need for part-time employment by students in these divisions and groups.

With these savings in educational time, the average male student will soon be ready for graduation at the age of twenty, and released much earlier for military service, for industrial production, or for essential activities in normal community life. These men will be needed and much sought after and may further reduce the opportunities for employment of summer trainees. Up to this time, however, our Student Employment Bureau has experienced an increased demand for the services of students available for full-time summer employment in industry, business, professions, camps, dude ranches, government, and others.

During normal times, the University of Texas has 11,000 students in the Long Session, and 6,000 students in the Summer Session. Normally a large majority of our students work at full-time jobs in the summer, earning money needed for expenses during the Long Session. The University of Texas will undoubtedly have a decrease in enrollment in spite of the accelerated program, and this should decrease the competition for these much needed part-time jobs. In normal times, 69 per cent of our male students seek part-time work. Now with the loss of summer earnings, and the reduction or elimination of the N.Y.A. funds, how will we meet this



VIEW OF THE OLD LIBRARY BUILDING, UNIVERSITY OF TEXAS CAMPUS

probable increase in the need of part-time employment? We will have our regular program of student loans and scholarships, and we are giving increasing emphasis to our cooperative housing program to offset increased living costs. In this section we are already experiencing an increased demand for part-time student employees, which we expect to continue during the present emergency.

Several small businesses which cannot meet the competition of wages being paid by defense industries are now using part-time secretaries and typists. Insurance agencies and small law firms are new customers to our Student Employment Bureau. Formerly they considered only full-time employees, but they are now adjusting office schedules so that part-time student workers can fit into their organizations. Department stores and shoe stores, that formerly used students only on Saturdays, are now using student clerks and salesmen on a part-time basis.

Filling station operators, cafes, and boarding houses are increasing their requests for part-time student employees. Many soda dispensers and drug clerks have been drafted, so that drug stores now find it necessary to use part-time employees. Small industries, businesses, and professions will find an increasing number of their personnel being called into military service or resigning to take more lucrative positions in defense industries, and many of these vacancies will have to be filled with student part-time employees who are permitted to adjust their class schedule to their work schedule. These conditions will help us to meet the increased need for part-time student employment to offset the loss of summer earnings due to the new year-round curriculum.

UNIVERSITY OF CHICAGO

The University of Chicago will have a new schedule of classes beginning with the Spring Quarter 1942. Students will attend classes either on Mondays, Wednesdays and Fridays or Tuesdays, Thursdays and Saturdays. This program provides for more time for study between each class meeting than does the present schedule of five consecutive meetings per week. The new plan will also permit students to obtain part-time employment—two students working part time and filling one full-time position. The academic program for the year will be maintained by attendance through four quarters instead of the usual three. This opportunity will be especially valuable to self-supporting students who wish to accelerate their college education. The opportunity for remunerative employment which some had during summer vacations can now be realized on this part-time basis throughout the year.

Arrangements have been made with several large companies in Chicago for the employment of students on a definite part-time employment plan for the coming year. A study-employment plan has been in effect through the cooperation of the University of Chicago and Marshall Field and Company during the current year. This plan will be extended next year to include many more students. The arrangements include study and employment on a four quarter basis. Minimum hourly and maximum weekly amounts of earnings are a usual part of the agreement. Students must maintain the academic standards of the University as well as employee regulations of the company.

The students who are not enrolled in the study-employment four-quarter program and do not plan to study during the summer, can avail themselves of the usual summer jobs. Camps will need counselors and jobs in war industries, no doubt, will be numerous. Present indications point to opportunities for employment of all students who desire to earn part of their college expenses.

The agencies—Laundry and Dry-Cleaning and the Off-Campus Tours—operated by students, will provide a very limited number of students with income during the coming summer.

LAFAYETTE COLLEGE

Accelerated college programs are the order of the day in the United States for the duration of the war, and Lafayette College, in keeping pace with the times, has adopted such a program, after long deliberation by the board of trustees and members of the faculty.

The Lafayette program, however, is somewhat different from those adopted by the majority of colleges and universities, since it provides for a summer vacation and at the same time enables undergraduates to complete all the work necessary for a degree in three years.

In discussing the program to be adopted, members of the faculty considered a number of factors, not the least important being the financial angle.

It was realized that a good many undergraduates would be faced with a serious financial problem if the opportunity for summer employment was lost and that a twelve-month program at Lafayette would work a considerable hardship on such students, some of whom may have had been forced to leave college. Another factor considered was the availability of engineering students for em-

ployment in defense industries during the summer.

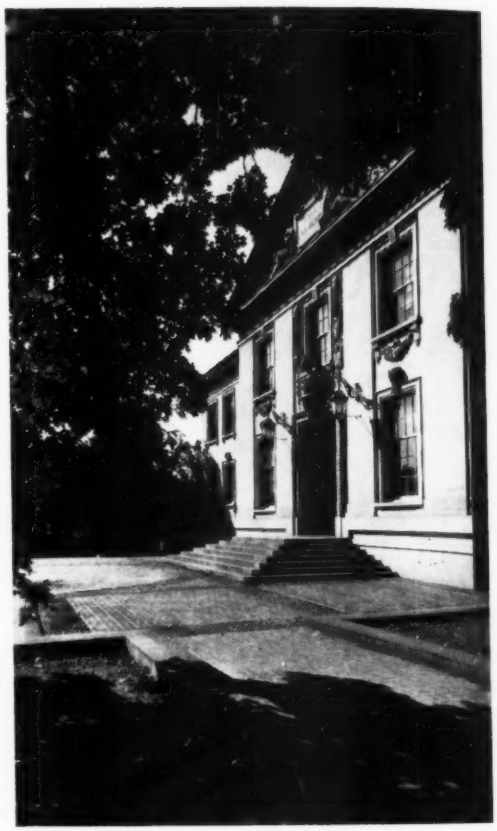
The Lafayette program, as adopted, extends the yearly period of college operation to approximately 42 weeks, all vacations except at Christmas being eliminated and the Christmas vacation being drastically curtailed. The college year next Fall will start on September 8 and end on June 30, 40 weeks of actual instruction being scheduled.

The college year will be divided into four quarters, of 10 weeks each. In each quarter, the student will cover work equivalent to one-third of a normal college year, and in the 40-week year, he will complete work equivalent to one and one-third normal college years.

The student will graduate at the end of 12 quarters, or three years, an actual elapsed time of 34 months. The course offerings and specimen curricula, stated in the catalog, are retained, and while adjustments may be made, the high standards of the college, both in quality and quantity, will be maintained. A summer session of six weeks has been scheduled for next summer for those students who seek to make up work or additional credits.

Dr. William Mather Lewis, Lafayette president, believes that this program is the best that could be provided for Lafayette students with least hardship. He pointed out that undergraduates will actually lose less than a week out of each normal college year, and that the loss of such time will be made up by intensified work and the absence of long vacations.

Under such a program, the average secondary school graduate will be able to complete his college work before he is called into the military service, if the present age limit remains in force.



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WHAT IS WRONG WITH SENIOR RECRUITING

HERBERT WOTTRICH, *Chairman*

Committee on Senior Recruiting in the Colleges

THE March issue of SCHOOL AND COLLEGE PLACEMENT carried two articles which would indicate that all is not well in the field of senior recruiting in the colleges. Dr. Strebel in "Placement From the Point of View of an Educational Institution" mentions at the end of his paper a few practices on the part of industry which, if corrected, would help matters. The article, "An Open Letter From an Industrial Personnel Executive to Deans of Business Administration Colleges" registers a strong complaint against colleges.

From these two cases it should not be assumed that college recruiting is a failure, we all know otherwise. Many colleges are doing a good job and there are a large number of industrial concerns whose representatives are welcomed gladly on the campuses. However, our two authors do indicate that there are conditions which could be improved. Is it not most likely that these poor practices are the result of a lack of understanding of the other's problems? It would appear that here is an excellent opportunity for the newly formed Committee on Senior Recruiting in the Colleges to start its work and be of a service to both the colleges and industry.

Therefore, will all of you college placement officers and all of you industrial personnel executives who are concerned with this problem write to tell me of the difficulties you have experienced. What is the other fellow doing which does not make your job a bed of roses? Does the personnel man wire you that he will arrive tomorrow, wishing to interview twenty-five men who will meet certain rigid requirements, or does he ask for interviews to be scheduled on a fifteen-minute headway and then not live up to it? Does the college man fail to follow through on plans made well in advance so that when you arrive on the campus there are no students for you to interview, or does he throw in a few "ringers" for you to interview, excellent men whom you would be glad to take but who you learn (through your interviewing technique) are not interested, all this being done to create a good impression on you for the college?

If you will write to me, I shall be glad to prepare a report for publication at a later date in this journal. Of course, your identity will not be revealed so "don't pull your punches." However, the best results will be attained if you will be constructive in your criticism. Address me at 80 Park Place, Newark, New Jersey.

BIOGRAPHICAL NOTES

ALEXANDER J. STODDARD, whose article "Effective Use of National Man Power" appears on page 5, is a graduate of the Peru State Teachers College, the University of Nebraska and Teachers College, Columbia University. He has received honorary degrees from various institutions, and was awarded the Butler Medal at Columbia University's Annual Commencement in June, 1938. Dr. Stoddard began his career as a rural school teacher in Nebraska, later became principal and has served as Superintendent of Schools in numerous villages and cities, including Denver, Colorado; Providence, Rhode Island; Schenectady, New York, and Philadelphia, Pennsylvania, which position he holds at the present time. He is chairman of a number of national educational committees, has served as President of the American Association of School Administrators, as Chairman of the Educational Policies Commission since its establishment four years ago and is a member of the Executive Board of the Association of School and College Placement.

"Training Within Industry," appearing on page 10, was written by CHANNING RICE DOOLEY, Director of the Training within Industry program of the Office of Production Management. Upon graduation from Purdue University in 1902, Mr. Dooley entered the employ of the Westinghouse Electric and Manufacturing Company in East Pittsburgh, where for several years he did engineering work and later established and became head of the Educational Department. During the war he served as Educational Director for the Committee on Education and Special Training for the War Department in Washington. In 1919 Mr. Dooley became Manager of Personnel and Training for the Standard Oil Company of New Jersey and remained there until 1929, when he resigned to develop and supervise the industrial relations program of the Standard Oil Company of New York. Upon the merger of this company and the Vacuum Oil Company, Mr. Dooley continued as Manager of Industrial Relations of the Socony-Vacuum Oil Company, Inc., his present position.

FRANK R. ELLIOTT writes from daily experience in his article "War-Time Demands for Higher Education," appearing on page 16, as the demands of the military services upon the colleges are continually before him in his capacity of administrative officer and member of the war-time council at Indiana University. Dr. Elliott served eighteen months as lieutenant and captain of infantry during the first world war. A graduate of Indiana and Columbia Universities, he entered the field of education administration after business experience with the Humble Oil Company of Texas and the United States Fidelity and Guaranty Company. He has been connected with Indiana University since 1921, where he is now Director of Admissions. He is a consultant to the National Youth Administration.

LOWELL O. STEWART, a native of Michigan, received his B.S.C.E. from Michigan State College in 1917 and his M.S.C.E. and C.E. from Iowa State College in 1927 and 1928. After serving in the U. S. Coast and Geodetic Survey from Deck Officer to Hydrographic and Geodetic Engineer on various types of surveys in the United States, Alaska, and the Philippine Islands from 1917 until 1923, he then became foreman on Construction, Schumacher Construction Company, and Chief of Party Michigan State Highway Department. From 1924 to the present time, he has been a member of the faculty at Iowa State College, and since 1938, in the capacity of Professor and Head of the Department of Civil Engineering. Mr. Stewart is a member of various Technical Societies and President of the North-Midwest Section of the Society for Promotion of Engineering Education. Among his literary contributions are: Public Land Surveys, History Instructions Methods, 1935; Career in Engineering, Opportunities, Requirements, 1941; A Guide to the Recovery of U. S. Land Surveys in Iowa, 1942, of which he is joint author. His article, "Career in Engineering," appears on page 22.

STEPHEN B. SWEENEY has been on the faculty of the Wharton School of Commerce and Finance since 1922, and during this time has engaged in numerous consultant and administrative capacities in business and government activities. He assisted in organizing the insurance programs of many of the pioneer air lines including the far flung Pan American Airways; served as Director of Workmen's Compensation of the Pennsylvania Department of Labor and Industry from 1932-1935; as State Director of Employment of the Works Progress Administration in Pennsylvania 1935-1936, and as Assistant Administrator, 1936-1937. Dr. Sweeney was appointed as Acting Director of the Institute of Local and State Government, University of Pennsylvania, when it was started in 1937 and has been Executive Director since 1938. In addition he has served as President and Director of the Philadelphia and Suburban Town Meetings; is a Trustee of the Philadelphia Bureau of Municipal Research, and a Director of the Tax Institute and The American Academy of Political and Social Science. His article "The Combination of Career Training and a Program of Service for Government" appears on page 32.

"The Women's Land Army," on page 46, was written by Dean T. B. SYMONS, a native of the Eastern Shore of Maryland. He served as State Entomologist from 1903 until 1914, at which time he organized the Extension Service for Maryland of which he has served as Director since its inauguration. In 1939 he became Dean of the College of Agriculture and Director of Extension at the University of Maryland, which position he occupies at the present time. Dean Symons is a member of a

number of scientific societies and has contributed to various bulletins.

HOWARD D. WOOD, whose article "The Counselor and Curriculum Construction" appears on page 59, is principal of the Hope High School of Providence, Rhode Island. Dr. Wood received his A.B. degree from Bates College in 1920 and his A.M. and Ph.D. degrees from Brown University in 1921 and 1925 respectively, writing his thesis on "Compulsory School Attendance." In 1931 he did special graduate work at Teachers College. He has served as high school teacher, as principal of elementary, junior and senior high schools, and in addition has taught extension classes at Brown University, Boston University, Rhode Island College of Education, and for the past fourteen years has taught courses in Guidance and Administration at the summer session of the University of New Hampshire where he is also director of the Annual Guidance Institute. He is a member of the legislative committee of the New England Association of Colleges and Secondary Schools, and numerous professional organizations.

Contributing to the symposium on page 29 on the question of "Military Policies in Effect in Industry," are P. W. BOYNTON, WILLIAM E. BYRD, JR., and M. E. NICHOLS. Mr. Boynton, a member of the Editorial Board of SCHOOL AND COLLEGE PLACEMENT, received his A.B. degree from Syracuse University, was engaged as a salesman by Socony-Vacuum Oil Company and later made Employment Supervisor. He is now on a leave of absence, serving as a Major with the Personnel Division of the Army Air Corps. After graduation from Western Reserve University, Mr. Nichols served ten years at Fenn College, first as placement director for co-operative students and later as Dean of Engineering. His industrial experience started during World War I as a machinist in a munitions factory, and was followed by machine shop work and surveying and construction work for the U. S. Reclamation Service. For the past year he has served as Personnel Manager of the American Steel and Wire Company, having been Superintendent of Training for the previous four years.

A native of New York City, FREDERICKA BELKNAP received her A.B. from Barnard College, did graduate work at Columbia University and secured her M.A. in Personnel Administration from New York University. After several years of business experience, Miss Belknap served as Director of the Bureau of Appointments of the School of Education at N. Y. U. from 1923 until 1929, when she became Director of the Personnel Bureau at New Jersey College for Women, which position she now holds. Her article "New Opportunities for College Women" appears on page 41.

THE BOOK REVIEW

Principles and Techniques of Guidance,

by D. W. Lefever, A. M. Turrell, and H. I. Weitzel. Ronald Press Co., New York, 1941, XVII—522 pp. $3.00.

This is one book which has a title that accurately describes its contents. Considerable attention is given to a discussion of principles of guidance but relatively more space is devoted to techniques which would be helpful to teachers, counselors and administrators in schools interested in improving the guidance service. The material is sufficiently varied to be useful at any level of the school system but those interested in junior and senior high schools, independent schools and junior colleges will find much which will be helpful.

Part I, dealing with "Points of View," contains chapters in which conditions affecting guidance, meanings, concepts, and principles of guidance are given thoughtful and comprehensive treatment. Different points of view of what guidance is are objectively presented and the soundness of each given critical consideration. Some readers may think that a more decided position would have made the book more useful as a text or a reference book. Under present conditions, however, the "middle-of-the-road" point of view seems a more tenable one. Much guidance in addition to vocational guidance, narrowly conceived, is needed in our schools. To broaden the term to make it synonymous with education only adds confusion.

In Part II the authors present a clear analysis of the place of the teacher in guidance, the need for specialists and definite descriptions of administrative organizations. A distinction is made between "line" and "staff" personnel and the functions of each type of person involved are described. Much of practical value is introduced in this section. Thought has been given to developing a reasonably practical plan toward which almost any school might work even though financial resources might be limited.

Parts III and IV deal with plans and procedures in guidance. Much detailed information including illustrations, forms, schedules, and case studies, is presented. Most counselors and teachers interested in guidance will find this material the most valuable in the book. Theories and explanations are generously discussed but the practical suggestions are

given in detail. A questionnaire for a growth-needs study, one for a counselor-activities study together with data collected from counselors in California, and a questionnaire and chart for admission to technological training are included in the appendix.

A feature which should appeal to any who may wish to use the book as a textbook is the presentation at the end of each chapter, of a summary, an extended list of questions and problems, and a comprehensive list of selected references including many periodical references as well as books.

Principles and Techniques of Guidance does not contain a great deal of material that cannot be found in other sources but it does simplify the work of busy guidance workers by bringing much together in one volume. Technical terminology has been largely avoided so that teachers with little specialized training will find it interesting and easy to understand. This book makes a notable addition to a rapidly growing list of general treatments of guidance for our schools.

DR. R. D. MATTHEWS,
Assistant Professor of Education,
University of Pennsylvania.

Shop and Class at Tuskegee, *by J. L. Whiting. Chapman and Grimes, Inc., Boston. 114 pp. illustrated.* $2.00.

An interesting story of the method of coordinating class room and shop instruction at the famous school founded by Booker T. Washington at Tuskegee is told in this most recent volume concerning the way of life at that institution. Mr. Whiting, presently Professor of Education and Psychology in Spelman and Morehouse Colleges in Atlanta, who was for twenty years Industrial Arts Education Adviser at Tuskegee, relates in this book the manner in which practical application has been given the Founder's philosophy that the most effective preparation for life is through the collateral training of head and hand.

Mr. Whiting tells of the genesis and development of the study and work program in vogue at Tuskegee and the satisfactory results which have followed its practical application in the school life of the students and in their subsequent careers.

Booker Washington said, "I favor the most thorough mental training and the highest development of mind, but I want to see these linked with the common things about our door." Mr. Whiting gives us revealing details of the manner in which Tuskegee's course of study is arranged to prepare the student to attain this ideal through emphasis in proper balance upon his class room studies and his accompanying shop experience. Under this system the academic studies become immediately useful and productively usable in transforming "listlessness and drudgery (of ordinary manual occupations) into vivacity and gratifying efficiency."

This theory, which, as Professor Whiting says, has been practiced successfully at Tuskegee for so many decades, is the main characteristic of our modern Workers' Education Program, which emphasizes complementing the worker's technical efficiency, whereby he earns his living, with a mental alertness and informed understanding, which give zest and freshness to life.

Convincing accounts are given of the extent to which the class-shop program of the school is linked up with the life of the community through the Placement Service, the Movable School of Agriculture, the Cooperative Student in Industry Plan, etc. The chapter on The Black Belt, which tells of the vitalizing service of the Movable School of Agriculture in bringing inspiration, and immediately applicable information on ways of better living to primitive people on vast plantations in remote districts is a thrilling narrative. There are chapters which give delightful glimpses of the general life of the school, and the series of letters from students in the Cooperative Students in Industry Plan, and the Rural Practice Teachers are charming and suggestive.

The chapters are not arranged, however, in the most logical sequence, and the treatment of the matter under discussion is often quite sketchy. It is to be hoped that at some future time Mr. Whiting will give us a fuller and more carefully prepared account of the rich experience upon which the facts set forth in the present volume are based.

WAYNE L. HOPKINS.
Executive Secretary, Armstrong Association of Philadelphia.

How to Get a Secretarial Job, *by Louise Hollister Scott and Elizabeth C. Belcher. Harper & Brothers, Publishers, New York, 99 pp.* $1.00.

How to Get a Secretarial Job, by Louise Hollister Scott and Elizabeth Corson Belcher, does excellently what it undertakes to do. The authors describe means of getting office work through free and commercial agencies, by letter, and by interview.

The job-hunting notebook device they recommend provides the beginner with an objective self-analysis and a sensible plan for presenting her skills and knowledge to potential employers. The experience and wisdom gained daily are set down and meditation therefrom must help overcome gaucherie and lack of alertness. Test materials and samples of work are substituted for the embarrassment of singing one's own praises.

While insurance provisions and retirement benefits are mentioned in a paragraph concerning salary, nothing is said about the provisions of the Social Security Act. As some firms have abandoned their own retirement plans because of this law and other organizations have not set up such provisions for the

same reason, it might be well in a new edition of this text to add materials concerning the law.

The chapter on "Working for the Government" brings together needed information about federal and other civil service positions. The chapters on "Application Letters" and on "Interviews" are unusually good in their clearness, simplicity, and brevity.

If all neophytes worked their way through this 104-page book—including the index—before faring forth to seek work, employers and employment agencies would be startled by the good manners, intelligence and workmanlike attitude of such applicants. It could be used profitably in a classroom from which students were soon leaving for the beginning of careers.

VICTORIA MCALMON,
Placement Coordinator, Los Angeles City College, and Member Advisory Council, United States Employment Service, Los Angeles, California.

ASSOCIATION NEWS

Report of the Secretary

The May number marks the last issue of Volume Two of SCHOOL AND COLLEGE PLACEMENT, and I should like to take this opportunity, in behalf of the Editorial Board, to thank all those who have contributed to the journal. The generous response which we have received has been most encouraging.

We are very glad, also, to note the progress which is being made by the various Committees, because we feel that the Association's greatest opportunity for service lies in their functioning. Therefore, we wish to urge our members to write to us concerning any problems in which they are particularly interested, and the Secretary will be glad to forward all such letters to the appropriate Committee Chairmen for study by their Committees.

We are desirous of having the work of the Association and also the journal prove just as helpful to our members as possible, and accordingly we shall be very glad to receive their suggestions or comments at any time.

Committee on Sustaining Membership

MR. A. M. BOYD, General Chairman

The activities of this Committee in securing Sustaining Memberships and Advertising has proved very successful, and each number of the journal has carried an increased amount of advertising, the current number having the most advertising of any issue thus far. The Committee wishes to take this opportunity to express its sincere appreciation to those companies and individuals who have supported the work during the current fiscal year.

Committee on Institutional Membership

DR. PAUL H. MUSSER, General Chairman

We are very glad to report that the response to the efforts to increase membership among all groups has been highly successful. We intend to continue our endeavors, for the success of our work depends upon the simultaneous cooperation of the secondary schools, colleges and business and industrial concerns in effecting the necessary and desired coordination of the educational function with employer requirements.

Committee on Technical Aspects of Business Placement

CHARLES E. WANGEMAN, Chairman

PROBLEM OF COLLEGE PLACEMENT IN WAR TIME

College placement officials can help in the effort of fully utilizing the training their graduates have received, more than ever before, in the crisis now facing us. It should be the objective of the placement bureaus to coordinate all information available concerning industrial openings and opportunities in the armed services. This information should be made available to all students and alumni and an attempt made to place these students and alumni in positions in industry or in the armed forces where their educational background will be utilized to the fullest extent.

It was recently stated that in January, 1942, there were approximately 5,000,000 people employed in war production work. By the end of this year 10,000,000 should be so employed and by the end of 1943 the estimate is 20,000,000. To accomplish this, people will have to be transferred from the civilian industries to the armed forces, and more women and older men employed. At the time of peak production an 8,000,000-man army is expected. The officer personnel in the army amounts to 8% of the total. When the quota of 8,000,000 is reached there will be a need for 640,000 officers. The placement bureaus can be of great aid to the forces in finding men who may be potential officer material. Many of these can be secured from men trained in technical colleges.

In a recent issue of FACTORY MANAGEMENT AND MAINTENANCE, General Lewis B. Hershey, Director of the Selective Service System, remarks, "The actual combat services sooner or later may claim all able-bodied men from 20 to 27 and many men above that age. Even the aircraft plants, the shipyards, and other key war industries must reconcile themselves to this fact."

This statement indicates that any recent able-bodied college graduate without some form of specialized training is almost certain to be enrolled

in the armed forces. The placement bureaus can advise these men of the opportunities in the armed forces for graduates without technical training. On the other hand, any individual with a technical specialty must be actively engaged in the direct use of that specialty in order to receive draft deferment.

This situation at once reduces college recruiting to relatively simple proportions. Industry, for its part, must carefully analyze its need, eliminating from the college recruiting program every requirement where a technical specialty will not be in constant use. During the emergency it is necessary to forego the common plan of employing technical men for training on broad lines directed toward preparing them for future executive responsibilities. It is within the spirit of the law, however, to give a short instruction course to prepare the young technical man to take our foremen's and supervisors' positions where his specialized background may be put to immediate use.

For the technical graduate employed in a defense industry, the future holds great responsibility as well as promise. Many of these younger men will find themselves in positions of responsibility far beyond their years. It is going to call for strong qualities of character for them to maintain their perspective and to develop in the face of an abnormal situation. There is unquestionably opportunity here for a young man to secure a tremendous amount of practical experience in mass production industry—experience which should be invaluable in later years whether or not he remains with his initial company.

Every day the fact is brought home that this war affects every phase of the nation's life, so that there is less and less possibility for a young man, regardless of his technical background, to secure a position where assurance can be offered as to post-war employment. His guiding principle should be to secure placement in an organization which has shown evidences of sincerity and honesty of purpose in the past in the treatment of its employees, and in which his education can be of maximum service in this vital conflict.

In order that college placement officials may find the opportunity for fully utilizing the training their graduates have received and make the best possible use of individual capacities and specialized training, they must be familiar with the relative need for different services and the opportunities available. They must not only know the interests and abilities of the graduates but also convince them of the value of following a definite and consistent program for physical fitness, additional training, and self-improvement. In this way the college placement official will help the graduate to find his job in relation to the present emergency and to do it to the best of his ability.

In addition, college placement officials have an even greater task in insuring the satisfaction of the personnel needs of industry by being in a position to supply those needs with qualified alumni. In most instances, college placement officials have complete knowledge of not only the undergraduate training of these alumni but also of their experience since leaving college. The demand for the technically trained men will grow as the war effort is increased, and college placement officials will find more and more of their efforts directed toward meeting it.

Committee on Guidance and Placement in the Secondary Schools

FRANK R. MOREY, Chairman

We are very pleased to announce that Mr. Morey, Supervising Principal of Schools in Swarthmore, has agreed to head this Committee, for he has a very real insight into the objectives of the Association and the latter's relationship to the high schools. Our readers will remember his article "What the Association Can Mean to the High Schools Throughout the Country," which appeared in the October number of SCHOOL AND COLLEGE PLACEMENT. Some of the placement problems which confront the high schools include a more adequate program of placement by public employment offices, working with the high schools in every community; extension of junior employment service programs; a smoothly functioning program of inter-high school placement effort; a program of work experiences as an integral part of the placement effort; placement follow-up and occupational adjustment procedures adopted quite generally by the high schools; and cooperation with college and university placement offices. There is a great opportunity for service in this field and we believe that the Committee's activities in studying these problems will be very helpful.

Committee on Student Aid and Student Agencies

With the accelerated program and the consequent inability of students to work during the summer time in order to earn part of their expenses, it will become increasingly important for the colleges to meet this problem by making additional efforts to offer opportunities for part-time work to students throughout the entire year. It is hoped that this Committee will soon be functioning actively, so as to undertake a study of these problems.

Committee on Senior Recruiting

MR. HERBERT WOTTRICH, Chairman

The Committee is now ready to function actively, and we are happy to announce that the following have agreed to serve as members: Herbert H. Williams, Director of Placement at Cornell University; Richard S. Stewart of the Standard Oil Company of Ohio; P. M. Russell, Personnel Relations Supervisor of the New Jersey Bell Telephone Company; W. E. Vogler, Director of Personnel at Purdue University, and Robert F. Chamberlain, Personnel Advisor, College of Engineering, Cornell University.

Committee on the National Youth Administration and Other Governmental Agencies

DR. C. E. CLEWELL, Chairman

The implications of the National Youth Administration are significant in their relation to student personnel workers, and the experiences which schoolmen are having with large-scale employment of youth, through the N.Y.A., have made a far-reaching impression of their thinking, and will be reflected in both the curricular and non-curricular programs of schools and colleges in the future.

The following latent values in the N.Y.A. School and College Work Program are of definite interest: 1. Changed social outlook of the student who can pay for incidental items; 2. Improved health of students who may defray costs for dental and medical services; 3. Improved scholastic work as a result of strengthened morale and a new appreciation of the value of time; 4. A closer mutual relationship between students and teachers who supervise the work projects; 5. Better knowledge of the relationship of manual labor to pay; 6. Development of proper work attitudes and skills help students locate and keep permanent employment after graduation; 7. Improved efficiency in the operation of the institution is made possible by the services of the student workers.

With the accelerated academic programs soon to become effective in many colleges and universities, the matter of registration of new students will doubtless depend, in many cases, upon the amount of financial assistance they can obtain. If the N.Y.A. Director is able to assure the prospective students of definite financial assistance on an N.Y.A. project, many will be enabled to continue their education. The need for a continuation of the N.Y.A. program is accentuated by the fact that many students cannot earn money towards their college expenses during the summer vacations as heretofore.

Basic factors, which point to the wisdom of a continuation of the N.Y.A. program, include the following: 1. No regular summer jobs for students who participate in the accelerated program; 2. Economic insecurity for many families because of the dislocation of industry resulting from the war; 3. Mounting costs of living; 4. Colleges must continue to function, not only in preparing young men and women for defense work but, also, to prepare for leadership during the war and in the equally important post-war period. Our nation cannot afford to neglect the education of its people at any time; such a short-sighted policy would be sowing the "dragons' teeth" for the future.

NEWS COMMENTS

Aviation

A reference to the nation-wide aviation project, intended to reach the 30,000,000 elementary and high school students of the country, which is being formulated and will be introduced into the everyday school curriculum this Fall, recently appeared in the *New York Times*. The purpose of this plan will be to make American children air-minded, and every phase of the classroom will be permeated with aviation news. A research committee, headed by Dr. N. L. Engelhardt is working on the project under the auspices of the Civil Aeronautics Administration, and the vast field of literature in aviation is being studied for materials that have educational importance. Units of aviation material are being prepared and will be made available to curriculum groups in any school system. Another interesting development in connection with the question of aviation is that Robert H. Hinckley, Assistant Secretary of Commerce for Air has urged the addition of aviation to the high school curricula.

Bryn Mawr College

The Bureau of Recommendations has experienced an increase in the varieties of opportunities open to women graduates, as a result of the emergency. The greatest change this year is the increased demand for women physicists, for industry and government are both crying out for them and are even interested in students who had only one year of physics as long as five years ago. There are also increased demands in personnel work and for statisticians, economists and laboratory workers of all kinds. Insurance companies are taking on women as claims adjusters, and newspapers and magazines are hiring office girls instead of office boys with the understanding that they may work into better positions.

Grove City College

Grove City College, Pennsylvania, operates one of the oldest radio stations in the United States; it broadcast for the first time in April, 1920. The college offers a communications engineering course which has been very popular, and this winter the Navy Department selected Grove City as the first institution in the country to train navy radio operators. A carefully selected group of sailors, all high school graduates, are now located at Grove City where they are taking a three months' course. Upon completion of the course, a second group will replace the first group. Graduates of the communications engineering course are in demand as technical workers in commercial broadcasting stations. The students, together with students of public speaking and music who participate in the college broadcasts, have

been able to secure summer positions as well as permanent positions in leading studios.

Goddard College

Goddard College in Plainfield, Vermont, has always followed the plan of having a winter work period during which students work in industry for wages, and an effort has been made to have the academic experiences of the students tie in with their jobs. Since the war emergency, it has seemed advisable to direct the work program into channels of national need, and accordingly the work period was extended to four months. The advantages to this plan are numerous: 1. Educators, students and parents are seemingly developing a general interest and belief in the advantage of such work-education experiences; 2. the student finds himself studying for a recognized purpose; 3. choosing a vocation can be done wisely during college; 4. employers encourage students in certain directions; 5. the job and the study integrate to the improvement of the student-worker; 6. the student can earn part of his education costs; 7. the student can contribute directly to the war program without interrupting his schooling; 8. the combination of work and study, properly integrated by mature guidance both at college and on the job, should result in a more discerning citizen in later years when the problems of a peace are to be solved.

Institute of Women's Professional Relations

According to a recent notice in the *New York Times*, at the conference on war demands for trained personnel which was held in Washington a short time ago, Secretary Frances Perkins stressed the importance of the colleges' preparing women for the war jobs they must undertake, and recommended that Latin, Greek and mathematics were probably the best subjects for attaining the self-discipline which would be necessary in war work. It was also reported that a large part of the 500,000 placements expected by the Civil Service Commission by July 1 would fall to women, as follows: in the professional field, 36,000 persons would be needed, 5,000 of them women; in the administrative field, 3 800 with 1,000 women; in the chemical field, 1,000 chemists with 65 women; in the economic field, 3,000 economists with 642 women; in the engineering field, 22,000 engineers with 86 women (or any adequately trained number); in the medical field, 34,000, with 2,600 women; 632 physicists with 75 women.

Harvard University

Along with the accelerated program of more concentrated work, the College is placing special emphasis on physics, mathematics, engineering sciences, chemistry, meteorology, geography and biology and some phases of geology, economics, psychology and military science; intensive full-time courses in Chinese, Japanese and Russian are being given. Following the spring recess in 1942, every student in the College who is not physically handicapped will be required to take regular physical exercise in an approved activity, for at least four hours each week. The training in physical activities and the subjects mentioned above is almost identical to the program recommended by the American Council in *Higher Education and National Defense*, Bulletin No. 23.

As a result of the emergency, various changes can be noted in recruiting. There has been a considerable increase in opportunities for technically trained men and for those arts graduates who are in deferred selective service categories. For the non-deferred and unclassified arts seniors there have been a number of opportunities in the government service, not guaranteeing deferment, but otherwise the service of the placement office has been limited to general vocational advice and the establishing of contacts which may prove useful after the war. Because of the accelerated program, it is anticipated that placement interviewing may be scheduled for the fall, as well as the spring, next year. The placement service for seniors in the College was suspended by the University last year, but a temporary program has been undertaken by the Phillips Brooks House operating on its own funds.

Michigan State College

In keeping with the accelerated educational program throughout the country, Michigan State is going on a four quarter basis with the beginning of the summer session 1942, thus enabling students to complete four years of work in three years. The men will be able to take military tactics courses and also to take advanced work which will lead to a commission at the end of their college years. The college is instituting a terminal two-year course that will include broad basic training for those who do not expect to be able to complete four years of work. If, at the end of the two years, or at the end of the war they wish to return to college, they may transfer to the four-year course without loss of credit. In regard to placement, the experience at Michigan State is that no able bodied man has a chance at any kind of job now, excepting a few highly trained technicians. Concerns that formerly were reluctant to consider women are now hiring them, and in some instances, especially in newspaper work, are finding that women do highly satisfactory work.

Naval Ordnance Laboratory

Men of high caliber with bachelor's or advanced degrees are needed in the following classifications: mechanical engineers, electrical engineers, physicists and draftsmen; the work embraces research, design, experimentation in connection with naval mines, aircraft bombs, ammunition and mine counter meas-

ures. Employment is on a civilian contract basis, the contract running for the fiscal year ending June 30, but it is expected that the contract of every person who has proved himself competent will be renewed for the duration of the emergency. Applications should be addressed to Robert F. Moore, Naval Ordnance Laboratory, Navy Yard, Washington, D. C.

Naval Research Laboratory

The Radio Division of the Laboratory is in need of additional personnel, and this department is interested in men who have had Radio Experience of any kind, provided it is combined with a suitable educational background. Graduates in Electrical Engineering or in Physics, who have taken Radio, Communications or Electric Courses, are particularly desirable, but men who have had one or two years of college work combined with substantial Radio amateur, Radio service or other types of Radio experience will also be considered. The Laboratory is also interested in men who have majored in electrical engineering, physics or mathematics, even though they have had no Radio experience. For men properly qualified there are positions open with salaries from $1500 to $5000 a year, depending upon qualifications of education, experience and general accomplishments. Application forms may be secured by writing to A. Hoyt Taylor, Superintendent of the Radio Division, Naval Research Laboratory, Anacostia Station, Washington, D. C.

Nursing

Katherine Faville, Chairman of the Committee on Recruitment of Student Nurses of the Nursing Council on National Defense, announces that the need for student nurses is getting more acute each day, as the government increases the number of graduates being taken for service with the armed forces. Women with some college preparation are able to advance more rapidly into positions of responsibility than are those who are only high school graduates, and therefore, it is very important that this need be brought to the attention of students in junior and senior colleges. The colleges themselves have offered to do anything they can. In some instances they are putting their laboratories and instructors at the service of schools of nursing this summer for group instruction in the preliminary basic sciences. In others, they are working out plans for a collegiate program in nursing whereby students will receive part of their work in college and part in nearby nursing schools. There are approximately eighty schools of nursing at this time which have an affiliation of some sort with colleges and universities, and this number will undoubtedly grow rapidly. Within a very short period the number of 50,000 students which have been requested by the Government will have to be increased materially as the size of the Army and Navy expands. Although the period of training is between two and three years, the student nurse in a short time is doing work which would otherwise have to be performed by graduate nurses, so that she is actually releasing graduates for government service during her time in school. In order to meet the need, State Nursing Councils have been set up in every state with the aim of reaching every college and high school during the winter and spring months through talks and vocational conferences, and the aid of vocational counselors is being sought in the responsible task of guiding the right young women into the right schools of nursing.

Pomona College

In addition to the training in research and radio engineering which is a part of the regular four-year course in physics and mathematics, Pomona College has offered to students who are not majoring in the physical sciences and have very little mathematical background, a course in Morse International Code. As soon as students are able to receive more than 20 words per minute, they are trained in the elements of theory, so as to enable them to take amateur license examinations. Students with amateur licenses can apply for admission to the signal corps of the United States Army or to either Class V-6 or M-2 of the Navy. The call of the United States Navy and Army for skilled operators has been answered by Pomona College through the offering of this volunteer course.

Temple University

Temple University has found that, because of the National Emergency, Senior recruiting has been definitely postponed by nearly all large industrial firms whose personnel directors regularly visit their campus. The lack of raw materials and the restrictions placed upon business as a whole by the Federal Government are so drastic that planned training programs seem unwise under present circumstances. The following paragraph is quoted from a letter from the personnel manager of one of our largest industries: "Unfortunately, the general uncertainty of the picture which we encountered during our visit to twelve colleges and universities in the Middle Atlantic and Southern States led us to the conclusion that it is unwise for our Company to start a training class this coming year. This will be the first interruption in our program since its inauguration twenty-two years ago. . . . It is my hope that future years may alter this picture."

As a result of the emergency many new employment opportunities are now open to women, which were not considered in their field before the outbreak of the war. A few of the unusual types of jobs for women include: gas welders, instrument makers, assembling airplane parts, trainees, claims adjusters, drafting and blue print reading, and engineering aides.

In order to meet the needs of students interested in completing their courses of study in less than the usual period of time, Temple will expand its summer school program for the duration of the war. The accelerated program will make it possible for students to complete their work in less time, but it will also affect student employment, for the curriculum will make it impossible for hundreds of students to take summer jobs, through which they usually earn the greater part of their educational expenses. More definitely affected are the Medical and Dental School students, and those who must attend summer sessions in order to complete the requirements for degrees before being inducted into military service.

University of Georgia

The University of Georgia has been selected by the government as one of the four colleges in the country at which will be located one of the ground schools for naval aeronautical training. This course is organized on a three-months basis, with a continuous enrollment of 2400 cadets for the duration of the war. The cadets are to be housed on the University campus and the University will provide the necessary classroom and athletic facilities. The University is also providing dining hall facilities for feeding 600 trainees who are being trained in Athens for the United States Signal Corps.

University of Pennsylvania

Based upon an almost unprecedented situation in the University's Student Aid Program due, in part, to the accelerated academic program, and also to other causes brought on by the war, a small advisory group to be known as the "Emergency Student Aid Council," has been appointed by Dr. Paul H. Musser, Administrative Vice-President. This new Council will be composed of the Rev. J. Clemens Kolb, University Chaplain; Dr. John H. Minnick, Dean of the School of Education; Dr. Melvin C. Molstad, Associate Professor of Chemical Engineering and Dr. C. E. Clewell, Director of the Student Aid Department, who will act as Chairman.

The following causes have contributed to the establishment of this new Council: 1. the accelerated academic program will prevent about one-half of the University's students from earning money during the coming summer vacation for the financial needs of the following year. Educators, generally, concede that this is one of the serious aspects of the accelerated academic program; 2. a great deal of uncertainty surrounds the continuation of the College Aid part of the National Youth Administration. If it is continued, the Council will be expected to supervise it in detail. If it is not continued, the responsibilities of the Council will be greatly increased because of its added duty of trying to find an equivalent volume of part-time employment in other directions; 3. despite the remarkable achievements of the Student Aid Department in recent years, it has never been possible fully to meet the demand for part-time employment on the part of self-supporting students. The responsibility of this Council will be to serve for the duration of the war as an effective group for aiding the Director of the Student Aid Department in his efforts to supply part-time and summer employment for financially needy students.

Wartime Commission of U. S. Office of Education

The Wartime Commission has been established to enable the Office of Education and the Government in general to serve most effectively now and in the future months and years, and it serves as a clearing house to canvass various problems in education which are raised by the war. Some of the problems on which the Commission is now at work include the following: 1. Training teachers for noncurriculum war tasks; 2. Volunteer, out-of-school services by school children; 3. Adaptations which can be suggested for elementary and secondary school curriculum; 4. Advancement of vocational training including training for war industries; 5. Teacher shortage; 6. Promotion of physical fitness among college and university students; 7. Problems of women students and the war including services women can render. The following additional proposals have also been placed before the Commission: 1. Assuring an adequate supply of leaders in rural life; 2. Articulation of academic calendars of secondary schools and colleges to facilitate acceleration; 3. Assembling and publishing accounts of changes made by educational institutions in the interest of war service; 4. Application of the cooperative plan of study to the various types of colleges and universities; 5. Conservation of adequate personnel on all levels of education to provide a continuous supply of trained men and women; 6. Requirements of the various Government agencies from the colleges in the way of a training program; 7. Latest military developments and their implications for higher education; 8. Policies to be established regarding education and training of returned soldiers; 9. Best kind of military training for high-school students.

John B. Stetson University

In line with war conditions, two new plans have been adopted at Stetson University. The first is to offer three semesters a year in all the Schools, thus making it possible for students to complete a full semester of 18 hours' credit during the summer. The second plan is to individualize instruction to meet the needs of individual students. Each student, on entering the University, will be given intelligence, aptitude, placement and vocational tests, and on the basis of these will have a program of work outlined for him. The entire program will be built around his own interests and abilities, and each student will be permitted to advance as rapidly in his course as his ability and health will permit.

UNIVERSITY OF PENNSYLVANIA
PHILADELPHIA

1740 1942

The Work of the University is Divided into the Following Undergraduate and Graduate Departments and Other Divisions:

The College
The College Collateral Courses
The Summer School
The Towne Scientific School
The Moore School of Electrical Engineering
The Wharton School of Finance and Commerce
The Post Graduate Division of the Wharton School
The Institute of Local and State Government
The School of Education
The Division of Nursing Education
The Illman-Carter Unit
The Division of Vocational Teacher Education
The Division of Cultural Olympics
The Division of Schoolmen's Week
The School of Fine Arts
The Department of Music
The Department of Landscape Architecture
The College of Liberal Arts for Women
The Graduate School
The School of Medicine
The Law School
The School of Dentistry
The Courses in Oral Hygiene
The School of Veterinary Medicine
The Graduate School of Medicine
The Evening School of Accounts and Finance
The Extension Schools
The Department of Physical Education
The Division of Physical Instruction
The Division of Student Health
The Division of Intercollegiate Athletics
The Division of Physical Education for Women
The Division of Student Affairs
The Reserve Officers Training Corps of Army and Navy
The Psychological Clinic

Information on the above University Departments and Divisions may be secured from the Secretary's Office, University of Pennsylvania, 3446 Walnut Street, Philadelphia, Pa.

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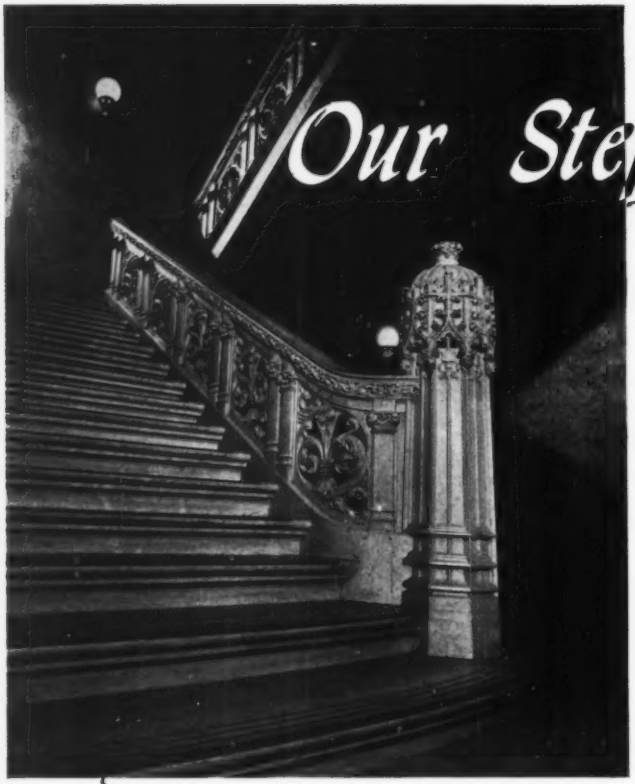

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